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# B. H. Thompson
## 1929-1957

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UNITED STATES DEPARTMENT OF THE INTERIOR
RAY LYMAN WILBUR, *Secretary*

NATIONAL PARK SERVICE
HORACE M. ALBRIGHT, *Director*

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# FAUNA OF THE NATIONAL PARKS OF THE UNITED STATES

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## A PRELIMINARY SURVEY OF FAUNAL RELATIONS IN NATIONAL PARKS

By
GEORGE M. WRIGHT, JOSEPH S. DIXON
BEN H. THOMPSON

Photographs by Joseph S. Dixon except otherwise indicted

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### General Index

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Thompson



Lake Merritt, Oakland, Alameda Co., Calif.
4:40 P.M. October 17, 1929

Trip made with George M. Wright. Afternoon, clear & cold; sun low, light good.

I estimate 1500 fowl on lake; mostly Pintail Ducks. Also many Mudhens.

Others seen:
2 Canada Geese
1 White Fronted Goose
1 Spoonbill
2 Canvas Back
2 Whistling Swans
Snow Geese (several)
1 Eared Grebe
Pied Bill Grebes (several)
1 White Pelican
Gulls, Calif. (many)
3 Ruddy Ducks.

All were feeding along shore, & upon the sand where people were feeding them grain, which the birds came for without fear, & were as persistent as domestic fowls.

Exceptions to this were:
The Whistling Swans, which were feeding by themselves in the far (East) end of the lake.
The Canvas Backs were likewise there. We had not seen these

Conference with Tomlinson, Barnett, Macey, & Broelman Sept. 28, 1930

Last wolf killed 1911 down in southeastern corner of park on Ohanapecosh River. Some are claimed to be in the park at present. Barnett thinks not.

A few wolverines are probably in the park.

Mt. Goats estimated 220-275. Goats move back & forth from Rainier to Cascades.

Open season on Elk in Lewis County. Barnett thinks this is unjustified.

Bear have increased in last few years. Bear sign abundant around Tamanous Mt. & over by White River.

Mt. Goats found usually at Sunrise, Yakima, Comanche Ridge, Goat Island Mt., Cowlitz Park.

Superintendent wishes that park boundary on East reached to top of Cascades Divide. It was originally so planned but cattle, sheep, & other interests

fought it & the present boundary was the result. This outside area is beautiful scenically, and naturally belongs with the region west of the divide for summer deer & elk range.

Supt. Tomlinson says that the area south of the park in the Chamafork of Clear Creek region should be in the park to provide a suitable winter range for the deer. Deer wintering there are shot by the inhabitants of that region who hunt every month of the year.

He also says that it should be a game preserve, if not in the park. This was asked for but gotten around by declaring game preserve areas on the high ridges of that region where the deer do not winter.

Sept. 28, 1930 5:30 P.M.

Five Sooty Grouse seen at Paradise. They were very tame.

A Pika was in the hotel. Has it taken up its winter home there? If so, on what will it live.

From Longmire to Lewis via Skate Creek Trail.
Sept. 29, 1930 G.M.W. and B.H.T.

This trip was made primarily to look over the deer wintering grounds around Bear Prairie some 4 to 6 miles south of the park. The Prairie is an old burn. It is covered with young Pseudotsuga, Thuya, Abies Amabilis, Abies Nobilis, Abies Grandis, Willow, Vine Maple, Huckleberries, Salal, & much other underbrush & moss. The deer live largely on these underbrush plants in the winter & on moss & willow buds. No young conifers were browsed. Nothing, in fact, showed signs of browsing. We saw no deer. But we saw deer tracks in 5 different places. This region is in the Rainier Nat'l. Forest. Not much hunting is done here because the deer high up are too inaccessible. One of the "old timers" at Lewis said that there were plenty of bucks upon Skate Mountain. The mountain top is largely chaparral.

From Longmire to Lewis via Skate Creek Trail.

This being just 2 days before opening of the hunting season, we saw several hunters at Lewis. One told us that his party of 4 had started for the Cispus, but upon arriving there, they found 114 other hunters already in the region. So they came on to the Ohanapecosh region on Summit Creek.

During this hike we saw one Pileated Woodpecker, and heard two more. Crossbills, Chickadees, Robins were plentiful and a few Crested Jays and ~~Gray~~ Gray Jays. Many Aplodontia burrows were encountered along the trail, especially in the burned over region.

Fox tracks (or small coyote) were seen in 3 places along the trail.

From Lewis to Longmire via Ohanapecosh.
Sept. 30, 1930

We drove over the new road which is to go East of the park

Last winter, Richards counted 23 deer along the road within half a mile.

From Lewis to Longmire via Ohanapecosh.
Sept. 30, 1930

to Yakima. We started walking 2½ miles below Ohanapecosh. The territory from Clear Creek to the Rangers Station is a valley with the same sort of vegetation as that at Bear Prairie. We saw no deer sign. But there were 5 cars parked at Summit Creek, sportsmans cars, and we had passed 2 pack outfits coming in.

The ranger at Ohanapecosh, Mr. Richards, said that deer are diminishing in numbers due to winter depredations of the inhabitants around Lewis. → He thinks that area should be a preserve. He doesn't think that the hunting in open season is causing any serious losses. The deer don't come down out of the park until well after the season closes.

He feels that the area to the South should be in the park also. 5000 Elk are reported on a national forest on the

east slope of the Cascades. Elk season is open this year because the forest service wants the area for domestic grazing. Richards says the forest supervisor said so.

Cougar: Five were killed by Clear Creek last winter.

Grouse holding their own, but "big hawks" after them. Richards kills as many hawks as he can. The hawks may be Goshawk or Swainson or even Redtail, he didn't know.

At the top of Cowlitz Divide, 4800 ft., we saw 3 Sooty Grouse in and near a patch of Mt. Ash. The ash berries were very bright & abundant.

Just over the divide, on the west slope, we came upon a wolf track, 4 1/4 inches long 3 3/4 wide pad 2 1/2" wide. The track was clear cut, pointed & with a pointed pad. It could not have been a cougar's track, and it was much too large for coyote. There are no dogs in this region.

Deer tracks were quite numerous on the Colville Divide. They were large tracks. Down in Stephens Canyon were many Mt. Beaver workings especially in the burned area. Many trees had been barked & some completely girdled at the ground up to 4 ft. This height may have been caused by snow. No high girdling was seen, although Brockmann reported it. Here also only the patches that had rotted & fallen off high up on girdled dead trees. Pikas were in the talus of this canyon by the hundreds.

Yakima Park 6500 to 7800 ft.
Oct. 2, 1930.

A very clear day. Snow had fallen & melted 4 days earlier.

A large Black Bear ran off across the valley just north of Sourdough Mt. toward Huckleberry Park. The bear had seen us at least 1/3 mile away, & kept looking back at us at intervals as it ran. Yet the men at the camp reported no bears in this district.

Fox tracks were seen upon the trail along the crest of Sourdough 1/2 mile above the camp. Left the evening as we returned, we saw fresh fox tracks along the same trail going in the opposite direction. There were many Pikas in the rock piles along the trail where the fox went.

Dixon found a large old Wolverine's tracks down in Berkeley Park, and we found another (probably the same wolverine) upon the Burroughs Mt., 3/4 mile away.

Rosy Finches, Pipits, Clark's Crows abundant. One Sharp Shinned Hawk chased a Goshawk.

Cayuse Pass, El. 6000 ft.
Oct. 4, 1930

Day very foggy. We met two hunters up in the pass about one mile outside the park boundary. They had shot a deer and a bear two days previously in the pass, and had seen two other deer. They reported "3 or 4 bear" in the vicinity. They said hunting is very good this year.

The bear is pelage was long and in good condition.

Eight ravens were in the tree near the head of remains of the deer.

Crossbills & Siskins were flocking in the trees & on the ground by the road camp. They were so tame that we got within 8 ft. of them as they fed on the ground, in flocks of 20 to 50.

Hiking up White River, we saw deer tracks for 4 or 5 miles.

The two previously mentioned hunters also saw a coyote in the region near Cayuse. The coyote was very dark.

Thompson



From Yakima Park to Carbon River at End of Carbon Glacier.
Oct. 5, 1930 G.M.V. & B.H.T.

Fox tracks were seen all around the Frozen Lake Region & all along the trail, at intervals, from Frozen Lake to Mystic Lake.

Coyote tracks were encountered in two places a few miles apart within this same region.

Deer tracks were seen in a few places near Mystic Lake.

No Mt. Goat nor goat tracks were seen anywhere along the trail, although much of the trail lay above timber line.

One Grouse flushed.

Siskins flocking nervously at timberline, as if preparing to migrate.

# General Impressions of the Park.

Oct. 6, 1930.

The Bear Prairie region is too isolated to give any great danger to deer wintering there. It is also reported to be very lightly hunted during open season.

No specific problem seems to present itself here.

The Clear Fork region is the critical one for wintering deer. Poaching in winter is serious here. The Park lions are killed off in this region also, and if there were wolves, they would meet the same fate. The law is not enforced. If this area were made a game preserve, it is questionable whether it would be patrolled any more effectively. If it were made a part of the National Park, its patrolling would be assured & the game protected. But the region is not outstanding, scenically, except for beautiful forest.

We traversed the section east of the park to the summit of the Cascades as far south as Chinook Pass, which is halfway down the

east boundary. Biologically, it would be far more natural for the park boundary to follow a natural barrier, such as a mt. crest, than the artificial line, following stream courses for the most part. Park animals range naturally to the mt. summits and they are killed during open season. As it is, Rainier is almost an isolated island from the game & forest point of view, and with the converging of the 3 new highways at Chinook Pass, the park area will need every protection available. This region east of the park to the summit should certainly be in the park, or else be a game preserve. However, the region is sufficiently scenic & rugged to warrant annexation on that basis, alone.

The game situation within the park needs no comment, except that the bear problem is increasing. Deportation has been tried without much benefit, namely because the park is too small for this method.

Compson

# Crater Lake

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## Interview with Godfrey

October 11, 1930

(Chief Ranger)

There is no winter police force in the park except Godfrey, himself, and he has no horse. Therefore the boundary cannot be patrolled. Godfrey has seen blazed trails for trap lines in the southern portion of the park. These blazes were made in winter. On the west side of the park, a trapper's tent & equipment are still cached in a tree. Godfrey is sure that winter poaching goes on. The park has mountain goat & fisher.

There is no wintering ground for deer. With the first heavy snow they are driven down into the Rogue River watershed which exposes them to hunters in the open season (Sept. 15 – Oct. 15). Bear wander out also & are shot but there seems to be a plentiful supply at present.

Some coyotes reported. No wolves nor cougar definitely known although both were thereoriginally. No wolverine known.

Thompson



Crater Lake
Interview with Godfrey.
Oct. 11, 1930

Godfrey saw 5 Elk on Sun Creek, July 1929, and 3 Elk along the south boundary Sep. 15, 1930; one near the Pumice desert, Oct. 1929.

We have seen no marmots, weasels, porcupine, nor squirrels all of which are reported to be here in abundance.

Godfrey thinks that the west boundary should be extended to include the deer wintering grounds on the Rogue River watershed.

Thompson



# Crater Lake "Old Timers"

H. Colvig — Medford
(Father-in-law of Warner the postmaster)

Applegate at Klamath Falls

Fort Hubbard — Storekeeper
Crater Lake

John Mayhew — Employee
Crater Lake

Thompson



Crater Lake
Hike to Union Peak with Godfrey.
Oct. 13, 1930.

Birds seen: Crossbills, Chickadees, Nuthatches, Crested Blue jay, Red-tail Hawk, Raven, Oregon-jay.

No tracks were seen, except one deer track.

Marmots were gone. Godfrey said they went into hibernation about Sept. 15, and would come out Apr. 15.

Golden Mantles & Chipmunks & Conys are still out.

We looked over the western winter range of the Rogue River headwaters again, & the area south of the park.

Godfrey showed us the Pine Beetle ravages & the control work. The beetle is discovered by the presence of small pitch & sawdust nobs on the trunks where the worm penetrates. Infected trees are cut down & topped. The sun

kills the heather, at about 85°.

Elk range sometimes down in the Union Pk. area. There were some grass areas, but not extensively.

Some Porcupine scars were seen.

Mr. Jont Hubbard said that Grizzlys were abundant here at one time. The last one was killed about 1885.

Elk, he said, were exterminated here about 1890. He called them the "Line-back Elk."

Wolves & Cougars were also abundant at one time, but have been systematically hunted & trapped by state trappers.

Deer are more abundant than 10 years ago, but are far fewer than in the early days of this region.

Thompson



Medford Oregon
Interview with Judge Colvig.
October 15, 1930.

Judge Colvig made his first visit to Crater Lake in 1863. He has been in Medford ever since, and has had an interest in outdoor life. He has a good memory & tells a rational story.

Antelope were along Antelope Creek in the early days. Colvig never saw them, however. They were also on Sprague River. In 1863, Colvig saw antelope on Blythe Creek, a few miles west of Bonanza. Antelope are out by Klamath now.

Elk were last seen by the Judge at Skookum Prairie 1878. He saw 3 at this time. The same year, Col Farlow killed the last elk at Jackson Springs. The Judge thought this was the last elk killed record in the county.

Thompson



Medford Oregon
Interview with Judge Colvig
Oct. 15, 1930.

Deer were far more plentiful in the past than at present.

Mt. Sheep were never known at Crater Lake. In 1865, sheep were on Stein's Mt.

Grizzly Bear used to be abundant around Crater Lake. The last one (Club-foot) was killed in the "early seventies" by John B. Griffin. Grizzlies were in the Applegate & Rogue.

Wolves were reported here, but the judge never saw them.

Mt. Lion. At Canyonville, the judge's brother (then just a boy) and two other boys were driving hogs to town. A Mt. Lion jumped on the back of one of the boys & lacerated him quite badly. The other two beat it off with whips.

Thompson

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Medford Oregon
Interview with Judge Colvig
Oct. 15, 1930

Beaver were seen by the Judge at Anna Springs Creek in 1863.

Otter were in the Rogue River down near Gold Hill. The Klamath Indians sold otter skins.

Grouse & "Mt. Drumming Pheasants" were abundant in the parks 40 years ago.

# Crater Lake

## Interview with John Mayben. Oct. 16, 1930.

Fur Bearers about the same as always: mink, marten plenty fisher, 4 tracks seen scattered over park winter of '28; wolves in the region, but scarce; cougar scarce, plentiful around rim, estimate 50. otter in region but not reported in park; wild cat: sheep nor goats here. Mayben thinks snow is too soft in winter for them. Snow is more crusted north in pumice desert. Elk were never in park so far as he knows, but are on increase now, deer also; bobcats here; no lynx; bears are plentiful and Mayben thinks that park bears are rarely shot outside. Most bear shooting is done over on Seven-mile Mt. where park bears don't go. Beaver in park. Mayben thinks that a game refuge around the park would be very beneficial.

Grand Canyon Nat'l Park
South Rim. Elevation 7000
Nov. 2, 1930.

Mammals seen:

Mule Deer Two does near the village. They are in blue winter coat & good condition. They have been imported from the north rim. There are about 50 in this vicinity. They are fed hay in the winter.

Albert Squirrel The squirrels are abundant around the village.

Bear None. Though they used to be in this region.

Chipmunks Not plentiful, though occasionally seen.

In the Canyon: Trip taken by G.M.N.P. & B.N.F. Oct. 31 - Nov. 1, from Hermit trail to Bright Angel Trail.

Mammals:

Mule Deer: Two does & 2 fawns seen down in Hermit Basin. Tracks were seen at

# Grand Canyon
## Deer in the Canyon.

intervals all along the trail, even down along the inner plateau. Two bucks & three does were seen at Indian Gardens. The bucks did not have very large ~~horns~~ antlers. All were in good condition. Many deer spend winter in the canyon. There was water every 3 or 4 miles, & enough although not abundant forage.

Big Horn Mt. Sheep. Sheep are reported in the canyon. We saw one track, & several droppings.

Antelope The antelope were introduced at Indian Gardens. They have held approximately 11, the original number, until last year when 2 fawns out of 8 lived, and this year 4 out of 6. The fawns of the year have small antlers

Grand Canyon

Deer in the Canyon

of ~~Deer~~. The older antelope have just lost their horns. The tips are beginning to harden for the new set. These antelope are fed grain in a trough. They do not seem to wander far from Indian Gardens & then are very tame. There are 17 mule. Some reports hold that Bobcats get the young. The summer heat is very oppressive down in the canyon. This range is probably too low for antelope.

Bob-cat

We saw 2 bobcat tracks down in the canyon: one about half way down on the Hermit trail, & the other at Hermit Cabins the morning after our stay.

Coyote

Coyote tracks were seen oftener than any

# Grand Canyon
## Down in the Canyon

other: all along the 20+ miles of canyon trail. G. M. N. found the old, some fox skull of an immature coyote at the head of Permit Gorge, about 5500 ft. elevation. The skull was in a crevice & no other bones could be found.

Rock Rats — Neotoma Desertorum, the Desert Wood Rat had built immumerable nests amongst the rocks, down in the lower half of the canyon. No trapped however were seen.

Ground Squirrel. Citellus grammurus grammurus were seen in abundance at Indian Gardens, but no where else along the trail.

Reptiles — None were seen, except a few very small lizards in the rocks of Lower Sonoran. They were

# Grand Canyon
## Down in the Canyon.

perhaps the ~~Hermit~~ Rocky Mt. Swift.

As a general impression, there was very little evidence of mammalian or reptilian life down in the canyon. Water & food seem to be a limiting factor, but not such as to account for the scarcity now prevalent.

Birds seen on the South Rim:

Western Robin abundant
Mexican Bluebird "
Juncos "
Crested Jay "
Woodhouse Jay "
Pigmy Nuthatch "
Mountain Chickadee "
Slender Billed Nuthatch, several.
~~Gray Titmouse~~, a few
Piñon Jay abundant

# Grand Canyon
## Days in the Canyon

Birds Seen:
Gambel Quail, 8 at Hermit Cabins
These were once present, then introduced again.
Rock Wren abundant
Canyon Wren "
Green Tailed Towhee a few
Various sparrows unidentified.
A Sparrow Hawk was seen to catch & eat a small bat at 4:35 P.M. down at Hermit Cabins.
Spotted Towhee 1 seen
Pine Siskin 1 seen

Thompson

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Grand Canyon
Roger's Hell Nov. 3, 1930.
Interview with Ed Hamilton who has been here 40 years.

Game is about the same here as in the past. There never was much, due to scarcity of water.
~~Big~~ Horn Sheep used to be more abundant in the canyon than now. They are pretty well gone. Bear have always been very scarce on the south rim due to lack of water.
Turkeys were never here, as far as Hamilton knows.
Elk were never here either, at least during Hamilton's knowledge.
Deer are more abundant now than ever before.
Antelope: Hamilton knows nothing of "5000 antelope" referred to in letter. He used to own a ranch about 15 miles out of Anita, now the W Diamond Ranch. Hamilton used to protect the antelope, which have now increased to an estimated

Grand Canyon
Interview with Hamilton
Nov. 3, 1930.

1000. We doubt this number. Game have always been scarce here owing to scarcity of water; except coyotes & bobcats, which have always been plentiful.

Nov. 4 1930
Trip to Havasupai Canyon
Distance 35 miles from G.C. This trip was taken to look over the proposed extension southwest of the park.
The territory is entirely covered with piñon pine, juniper & sagebrush, as well as other chaparral plants, but no yellow pine. Hence there could be no lumbering. Grazing is the only other possible use of the land & this area is very dry. We saw about 10 water holes. But owing to the open nature of the cover, & large old burned over areas, the land would be ideal for antelope & deer.

# Grand Canyon
## Trip to Havasupai Canyon.
## Sept. 3, ~~1913~~ 1930.

This area could serve as a game preserve for the park as well as a supply for hunting outside the boundary.

Pixie saw deer tracks at Base Camp.

Birds seen en route:

Piñon Jays about 250.
Woodhouse Jays about 10
Slender-billed Nuthatch 3
Juncos very abundant
Mexican Bluebirds very abundant
Red-tailed Hawks 6
Ravens 3
Linnet, 1 female
Townsend Solitaire about 6
Golden ~~Crowned~~ Crowned Kinglet 2
* Mammals seen:
Jack Rabbit, 1 Lepus Californicus
Chipmunks a few
~~Ground Squirrel~~ 1 Eutamias umbrinus frenatus
Rock Squirrel 1
* Western Robin a few

Two porcupine workings were seen at Base Camp.

Grand Canyon

Trip to W Ranch 26 miles, & side trips out of north of ranch about 10 miles.

Nov. 4, 1930

Today we went in search of the antelope referred to by Hamilton. The territory for 15 miles all around the ranch was open, rolling grassland. Cattle & sheep graze this area. Water is very scarce, but sufficient to keep at least the 2000 head of cattle which we saw, & the 1400 sheep.

This is where the antelope range, but we saw none. Dixon interviewed a workman at the ranch who said that he had once counted 156 antelope in one herd about 3 years ago. This was all he would affirm. He further stated that antelope are more scarce now than 10 years ago.

My impression is that the area we saw yesterday could be antelope range but is not naturally so. These antelope have strayed from

Grand Canyon
V V Ranch trip
Nov. 4, 1930

south of the juniper proposed area for many years, & they prefer to stay in the open rather than the juniper country. Therefore, it would be almost useless to try to make antilope territory of the proposed extension. And antelope range would have to include much of the V V Ranch, & have no natural barrier to the south.

We were told that the antilope range even further west than we went.

Badger holes numerous in the open country.

Coyote not very troublesome We saw one. Sheep herders said they rarely bothered.

Ground squirrels plentiful.

Returning we saw 5 Mule Deer (4 does, & 1 spike buck a very light buff color) drinking at Pomelon Tank about 7 miles south of the park. This was 4:50 P.M.

# Grand Canyon
## Ranch trip
## Nov. 4, 1930

The deer were in wonderful condition, full winter coat, and bounded into the junipers as we drove up. The fawn of the buck was so light as to be almost an albino.

Birds seen:

Golden Eagle, 2. One flew up from the ground near Dompson Tank. The other flew over the Ranch.

Marsh Hawk, 6 seen. Of these 2 were eating some prey. All were over the grassland.

Red-tailed Hawk 2.

Raven 2

Shrike, 4. One shrike chased a small bird for 1/3 mile then another shrike joined in the chase. We could not see the finish.

Piñon Jay, many

Woodhouse Jay, 2

# Grand Canyon
# Ranch trip
## Nov. 4, 1930

Birds seen (continued):
Townsend Solitaire, 4
Bluebirds many
Mountain Bluebird, 1
Juncos, many
Robins many
Meadow Larks, 1 in the grassland
Horned Larks, Hundreds
Brewer Blackbirds, 3

Grand Canyon Nov. 5, 1930.

Trip from Main Park Entrance through edge of the cut over area, then on to Camp 36, north to Rim Road, Desert View & East to Cocomino Basin.

The cut-over area has been logged very carefully; only about half the timber being cut. But much of the timber cut was valueless on account of heart rot — in some places it seemed to amount to about half. The beauty of the cut-over area is only slightly impaired. The undergrowth, of which there is very little & that foliage should be improved by the cutting.

Grazing in the past several years has been too heavy. The grass is very sparse & all trees have been browsed clean about 6 ft. high, resulting in the death of most of the small oaks, berries, & cedars. There is practically no reforestation in this area.

Some cattle are grazed up to the very rim of the canyon still. A water hole is just off the rim road. The park boundary comes within half a mile of the canyon in much of this area. And this is where the cutting has been done.

Grand Canyon Nov 5, 1930.

Out toward Cocanino Basin, we went through several miles of low juniper, & then into fine range country, ideal for antelope. The grass is abundant.

Practically, the only yellow pine belt of any consideration on the South Rim, is that in the Timber Sale area. Perhaps, when it is cut over, it might be more available for park acquisition & would provide better protection for game & bird life on this side. Cutting, as it is being done, will not damage the area for park purposes.

Mr. Paul Franke, park naturalist saw a 3/4 grown Lion cross the road in the park last spring.

Four Yosemite Mule Deer were shipped here in 1927. One died. The other 3 have had no young so far as Franke & Finnan Fenger. They occasionally see one of the does.

We have seen no Mesa Verde Deer as yet.

Golden

Mesa Verde Natl Park.
Elevation 6900 – 8500 ft. Nov. 8, 1930
Interview with Marshall Finan
acting Superintendent.

Wild Turkey here in the park at present. 14 were seen in one flock a year ago by a ranger. Turkeys were sacred birds of the cliff dwellers, who used their feathers for clothing & their bones for implements, but did not eat the meat.

Mt. Lions are on the mesa, few. Coyotes, Swift Fox, Bobcats also present. Mule Deer, estimated 300. Porcupines very abundant. Have injured much Pinon Pine in certain critical areas. 30 porcupine have been shot. The trees in front of the Palace Ruin are in the most critical area. Another seriously damaged area is up near Park View Point on the south rim.

Eagle: are present. An eagle 4 years ago, caught a full grown Bob Cat, 15 lbs., carried it by its back, soared 1800 ft. high with it, then down to its nest where it tried to drop it in the nest, but missed. Horsemen saw it

Thompson



Mesa Verde
Interview with Jiman, continued
Nov. 8, 1930

Mountain Sheep were here in the past, but not in recent times. We think they could live here if reintroduced.
Antelope seem to be out of the question.
Bob White Quail have been introduced near the park, & so have California Quail, & pheasants. The Scaled Quail & Gambel Quail are native here.
Some Blue Grouse are in the park; 24 were seen one morning this summer at the construction camp.

Jiman contemplates the development of water holes on the Mesa. This would greatly augment wild life. It would not be a great expense, & seems very desirable.

Mesa Verde
Trip to upper Prater Canyon.
GMW + BHT. Nov. 19, 1930.

Pinkey Grouse, one female was seen by the cabin, and three, about half a mile down the canyon, two of which were seen to be males. They were feeding in the meadow next the west slope.

Many coyote & fox tracks were seen all down the valley for 2 miles. Some deer tracks. Many Badger workings. This was all in the meadow-land down in the canyon. Three old windmills & wells are in this area. Many Magpie Juncos & Jays were at one of these ~~old~~ water holes.

More water holes would be feasible & desirable.

Two Horned Larks were seen on the main highway.

Grand Canyon
From Vermillion Cliffs Lodge to
South Canyon, via ~~Tank~~ Cain.
Nov. 14, 1930

Snow had set in the night before, but was not falling in House Rock Valley. The Care Taker at ~~Tank~~ Cain said that deer are not so plentiful in this east slope range as in previous years. Hunting was stopped, at least temporarily. The deer winter down on the juniper slopes, even to the edge of the grassland. We were told by an old-timer at South Canyon that there are only about 1/5 as many deer on this east winter range, as there are on the west. The country seemed like ideal deer country, except that browse is very scarce.

We saw about 50 head of cattle grazing in the House Rock Valley. We saw no buffalo. They had been to ~~Tank~~ Cain the day before for water, and were reported to be down in the low places out of the wind. We were also told at ~~Tank~~ Cain that there are no antelope in the valley. It seemed

Grand Canyon
South Canyon to Kane.
Nov 14, 1930

like excellent antelope range, in fact, more so than for cattle. The grass is quite sparse over much of the valley.

Mr. Weatherill, at Kaibeto, an old timer in the region, & the discoverer of Moqui Vale, said that this whole northern range used to be covered with good grass. He supposes, then, that it must have been so here too. The Grand Canyon Stock Co. still holds the water rights to most of Houserock Valley. Consequently, the buffalo are grazed out of it.

An old-timer at South Canyon hunts lions occasionally. He says they are few now. But that they come back, if protected for 3 or 4 years. He thinks that deer & cattle could both be kept on the Kaibab, if they were both in moderate numbers.

As we came from Mesa Verde, we stopped at Kayenta. Weatherill told us that all the

Grand Canyon
Note on Heatherfill at Kayenta.
Nov. 12, 1930.

Indian Lands are so badly overgrazed by sheep & goats that the land is eroding away and the water supplies being lost. Sheep eat the grass on the natural lines & then the lines wash away.

He is interested in seeing Turkeys, Pheasants & Bob White quail put on Navajo Mt. & Mesa Verde. Also Brother raises Pheasants.

# B. H. Thompson
## 1929-1957

## Journal

1931 Florida: Everglades N.P.
Calif: Pinnacles National Monument
Southern Calif. – bighorn sheep
Death Valley
New Mexico: Carlsbad Caverns N. P.
Colorado: Mesa Verde N. P.
Arizona: Grand Canyon N. P.
Utah: Zion N. P.
Utah: Bryce N. P.
Arizona: Grand Canyon N. P.
Colorado: Rocky Mountain N. P.
Wyoming: Grand Teton N. P. Yellowstone N.P.
Calif: Yosemite N. P.

Everglades Natl. Park, Florida

Trip from Miami to the "Royal Palm State Park", and along old road to Westlake, 8 miles from the ocean at Cape Sable. Peterson, Wright, & Thompson, drove car, returning same evening. Elevation about sea level. 2:00 PM — 7:00 PM in the park. returned after dark.

Jan. 16, 1931

The first few miles, up to the state park, were a grande pine and palm stand with the usual undergrowth. The second stage was flat grassland, swampy, with islands & hummocks of palm clusters — very beautiful and tropical looking. The third stage, as we drew nearer the sea, was mangrove thickets in standing water. Each phase covered many miles. Many small areas have been burned, purposely it seemed. These were brown ugly dead patches of several acres, each, oftentimes.

The road is on a canal bank. The canal served as feeding ground for grebes, kingfishers, herons, gulls, & many other forms of life.

# Everglades (cont.)

Jan 16, 1931

At Westlake, we took a boat & rowed part way round the lake, rowing about 45 minutes, & returning at dusk. The lake was completely surrounded by mangrove. We saw a few Florida Gallinules, ordinary Coots, Seaupes & one Rail?.

The boatman had been in this region for 30 years. He occasionally saw coons & otter, but no flamingos.

Returning after dark, we saw two Racoons, about 1 mile apart by the road side.

Birds eyes showed like red flares in the car light. We saw one Chuck-wills-widow? in the road. It flew out of our lights.

Birds seen:

1 Great blue heron — many
2. Egrets, snowy & American — few
3. Louisiana heron — many
4. Little Blue heron — many
5. Little Green heron — one
6. King-fishers — many
7. Bee-birds — many
8. Black Vultures — many
9. Robins — hundreds

# Everglades (cont'd.)

Jan 16, 1931

Birds seen:

10. Grebes (pied billed ~~bill~~) — a few
11. Florida Gallinule — few
12. Coots — many
13. Scaups — many few
14. Marsh-hawk — several
15. Yule-men — few
16. Rails — often heard.
17. Swallows — few, could not identify
18. Crows — many
19. Purple-grackle — many
20. Shrikes — many

# Everglades Natl. Park

Jan. 17, 1931

Trip across Tamiami Trail.

Today we saw much the same type of country as that of yesterday. But we saw many more birds.

1. Wood Ibis — many thousands
2. Egrets — " "
3. Swallows — hundreds of thousands ~~most~~ most of these were near Sarasota
4. Great blue herons — hundreds
5. Little " " — "
6. " " " white phase — many
7. Louisiana " — hundreds
8. Great white " — one
9. Water-turkey — about 20
10. Kingfisher — many
11. ~~Purple~~ Grackle, Great-tailed — 100's
12. Cranes — many
13. Buzzards — hundreds
14. Black-vulture — few
15. Marsh hawks — few
16. Florida gallinule — many
17. Pied-bill Grebes — few
18. Rails — heard only
19. Hawks, unidentified — a few
20. Glossy Ibis — about 5
21. White Ibis — many
22. Pelicans — many

Everglades
Jan 17, 1931

The great flocks of birds were a tremendous sight. The wind blew from the east, so they all faced east as they stood in the tall grass, or perched on low cypress or mangroves. At a signal, so it seemed, they would all rise into the air, then gradually settle back out of sight.

Everywhere for nearly 50 miles we saw these birds in the grass, in the trees, on the shrubs & along the streams. But the Wood Ibises & Egrets seemed to flock together most.

This country was much more beautiful than the country around the Royal Palm State Park. There was much more cypress forest, & palm hammocks, and streams. As we drew near the little town of Everglades we got into mangrove thickets again. Here Ibis[illegible] was far more scarce than in the open grassy glades.

An old trapper told us he caught Raccoon & occasional Otter-

Pinnacles Natl Monument, Calif.
Mar. 3, 1931

This trip was made to see whether the Yosemite band of Tule Elk could be placed in the Pinnacles.

Mr & Mrs. Wright, Mrs. Dixon & I arrived about 4:00 PM, & met Mr Dixon & Mr Hawkins (superintendent of the monument).

The entire party drove up the west canyon, starting from the ~~pa~~ central entrance & traversing the newly acquired portion of the monument.

Some willow grew along the stream bed, but rather sparse. The area is not swampy. A little trickle of water was present but Hawkins said that it would not last long. There is very little grass. The area is mostly a dry chaparral canyon, not very suitable for Elk.

If Elk were placed there they would need to be fenced in a paddock, fed & watered. Otherwise they would wander out of this dry area to more favorable spots — namely ranches.

Pinnacles N.M.
Mar 4, 1931

The same party — excepting Mr. Hawkins — returned to the Pinnacles from Hollister, arriving at 8:00 A.M.

This trip was taken up the main canyon of the old Pinnacles area in company with Ranger Marcott. We walked to the caves, going to the upper end of them, then returning by way of the west canyon wall to the camp ground.

Forage conditions were the same as in the west canyon.

Hawkins says there are: Coyotes, Wild-cats, Coons, Skunks in the area, as well as the Black-tailed deer, of which we saw five does & yearlings. They were in good condition & close to the camp ground by the ranger's house.

Birds seen:

Many Buzzards soaring in pairs around the pinnacles. Hundreds of white throated Swifts along the cliffs. Some entered the caves.

Canyon wren, Calif. woodpecker

Thompson



Pinnacles

Mar 4, 1931

Song Sparrow, Brown Towhee, Intergrant Warbler, Vigors Wren, Wren-tit, Calif Blue-jay, Robin, Mexican Bluebird, W. White-crowned Sparrow, Red-tailed Hawk, Sparrow-Hawk, Burrowing Owl, Crows, Shrike, Meadow Lark, Say-Phoebe, Titmouse.

Last year's nest of Black-headed Grosbeak.

Mr. Hawkins took us to see the Butts collection of Indian Mortars. There were about 400 mortars & pestils. They had been gathered mostly in the region around the monument.

Thompson



Pinnacles
Mar 4, 1930.

This collection of relics is to be donated to the monument as soon as there is housing or museum facilities.

(My personal opinion is that the collection is not worth much. It is simply an endless repetition of the same thing gathered in a haphazard fashion without records).

There is another collection like it, in Monterey County, which will be given to the monument under the same conditions.

A rancher near the Pinnacles has the last Condor's egg taken from the Pinnacles, which was about 40 years ago. He is holding it for about $500.

In general: Hawkins is anxious to get the elk for a spectacle, & the mortars too. He hopes for a direct road over to Gonzales, or there about. He is a golf player man, but sees only the spectacular side.

Thompson (Note: error in p. numbers) 97

Interview with James Moffitt
Calif. Fish & Game March 25, 1931

Concerning Mt. Sheep

Robert Little, F. & G. warden at Banning Calif. is one to ask about sheep in the San Jacintos & vicinity. He says there are 1500 Mt. Sheep on San Jacintos & south to border. Many others range across clear to the Colorado River.

Elder, F. & G. warden at Big Pine for data on Mt. Whitney Region. Moffitt says: "Mount Tom, directly west of Round Valley, particularly the eastern slope, holds upwards of 60 head of sheep at all times. Most of the others are found around Mt. Baxter saw mill and Oak Creek pass west of Independence."

Sheep are found also in: White Mts., Bonne Stake Canyon, Piute Mt., Beverage Mt., Waroba Mt., Lead Canyon, Head of Willow Creek, & on down as far as Cerro Gordo.

Thompson



# Death Valley Trip

## From Darwin to Dantzin Falls

April 11, 1931 8 – 11AM

Birds seen:

1. Pigeon Hawk (dead & dessicated)
2. Linnets (about 10)
3. Rock Wren 2
4. Say Phoebe 2
5. Desert Sparrow 2

# Death Valley Trip

## Darwin Falls Canyon

April 11, 1931 11:00 AM

The canyon is perhaps a mile long from upper falls to main road, quarter of deep, about 400' deep, and very narrow at bottom. A clear stream of spring water runs down through the canyon with a profusion of water plants, watercress, mimulus, willows, ferns, & even sage & chaparral. It is a great place for birds.

Birds seen:

1. Western Robins (nesting) 2
2. Redwing Blackbird, immature pair
3. Yellow-throats 3 females
4. ~~Song Sparrows about 6~~ (Song Sparrow 2) ?
5. Rufous Hummingbird 2
6. Costa Hummingbird 2
7. Sputtering Warbler
8. White Crowned Sparrow 10
9. Fox Sparrow 2
10. Ruby-crowned Kinglet
11. Savannah Sparrow about 4
12. Say Phoebe
13. White-throated ~~sparrow~~ Swift

Death Valley, Calif.
Mesquite Springs, North End
of Valley. Luxuriant small grove
of Mesquites, & a spring.
April 12, 1931

1. Vigors Wren 1
2. ~~Cowbird~~ 1 Cowbird
3. Savannah Sparrow
4. Black Phoebe 1
5. Say Phoebe 2
6. ~~Lutescent~~ Warbler 4
7. White-crowned Sparrow #3
8. Green-backed Goldfinch 10
9. Linnets 2
10. Ravens 3
11. Yellow Throat 1
12. ~~Gnat Catchers~~ (several)
Gnatcatchers

Death Valley, Calif.
Furnace Creek Inn, April 15 1931
Interview with John Mills, guide
who has been in Death Valley 35 yrs.

Mt. Sheep. Mills saw 35 head up near Cow Creek in the ~~Panamint~~ Funeral mountains, & has also seen sheep near Daylight Springs. This, within the last 3 years. Sheep do not come down to the springs & streams early in spring & summer when the "tanks" are full, but later they have to. They will not come near if one is camped about the water. Mills has seen them "play" in the moonlight up in the grassy areas in the mts. Sheep are also south of Telescope Peak in the Panamints.

Mills is the game warden here & protects the animal life. He says that the Indians (all half starved Indians) kill sheep now & then, but he allows no hunting by outside parties.

There are more sheep now than 35 years ago, also more of all animal life.

Thompson



Death Valley Calif.
Furnace Creek Inn, April 15, 1931
Interview with John Mills.

Kit foxes abundant in the valley.
Coyotes wander down occasionally. Mills says they are more numerous now since the hotel has thrown out garbage than in the past. He doesn't think they get many lambs.
A few Bobcats may be met in the mountains around the valley.
Rattlesnakes are exceedingly scarce. There used to be a great many near Rattlesnake Point (5 or 6) might be killed within a mile, but they are gone now. Mills has killed two near Furnace Creek Inn this year, but has not seen as many in the region in the last 3/5 years.
Antelope were never in the region. The nearest ones were in Nevada about 75 to 100 miles away years ago.
No deer here either.

Thompson



# Carlsbad Cavern Trip

(From Van Horn to the Caverns)

April 21, 1931, 5:30 AM - 9:30 AM

The trip lay across creosote desert to the base of the Guadalupe Mts. Many flowers were in bloom, especially a species of cruciferae like Sweet Clyerus which matted the desert floor, and had done so all the way from El Paso. Several Swainson's Hawks were seen on posts from 6:00 o'clock on. Six Jack Rabbits & an many Cottontails were seen.

About 7 miles south of the Guadalupe cliffs we came upon 2 Golden Eagles in the road who had just killed a Jack Rabbit, and they were eating it. It was still warm. One Eagle flew away as we approached. The other sat on the ground until we stopped within 20 ft. of it. Then it flew over behind a knoll about ¼ miles away & did not return, although we waited 15 minutes. This was at 8:00 AM. But 2 Ravens immediately flew to the road about 3/6

# Carlsbad Cavern Trip

## Van Horn to Carlsbad Cavern April 21, 1931.

Left from the hill & searched but did not go to the rabbit. We did not have time to wait for the return of the Eagles to see their relationship with the cave.

Upon the Guadalupe plateau there were junipers, scrub oak, the large Mescal (Agave wislizeni) which was just sending up shoots to bloom, and some of the narrow-leaf yucca were in bloom. A few yellow pines grew near the road. The pine forest on top of the Guadalupes can be plainly seen.

## Carlsbad Cavern

The region is the low rolling foothill portion of the Guadalupes. The mesa just around the cave is covered with the small mesa, tree cactus, junipers, soto, Cotton-tail and alum land. Two Cactus Wrens were

H Simpson



# Carlsbad Caverns

Apr. 21, 1931 2:00 PM - 3:00 PM

building a nest in a tree cactus across the wash in front of the administration building. The nest was 6½ ft. above the ground. It is wholly made of dry grass, shaped like an oval, turned on its side. It is about 1 ft. long by 8" wide & high, quite symmetrically shaped. The two were looped very nearly alike in every respect. Both birds worked, bringing in grass & depositing it inside the nest. They made trips on an average of 5 minutes. Each time they left the nest, they flew to the top of the cactus, perched, and looked around from a few seconds to several minutes. They never backed out of the nest. They remained in the nest each time from a few seconds to a minute. Both never entered in the at once, but alternated.

# Carlsbad Cavern Trip.
## Guadalupe Mountains
## Trip up Big Canyon with
## J. Stokley Ligon & J. M. Wright.
## April 24, 1931

We drove to Grave's Ranch, 50 miles from Carlsbad, and from there about 6 miles up into the mouth of Big Canyon to Grave's Sawmill. From here we hiked about 4 ~~5~~ miles up the canyon to a stream of clear water and about 1 mile beyond where the water was first encountered.

The canyon is wild & picturesque beginning with high slopes & cliffs, & narrowing to a deep narrow chasm. At first we went through decent vegetation, yuccas, sotols, junipers, pinyons, scrub oak, & chaparral. Farther up the canyon, hardwoods such as maples, madrone, & others, were interspersed with a few yellow pines & large junipers.

Ligon said that the lower portion of the canyon would be excellent for Peccaries, which are now extinct in the region but which used to inhabit it. A few peccaries are in the sandy

Sig has planted wild Tu
in the Guadalupes, about
2 years ago, taken from the
White Mountains. He says
that the real western wild
Turkey will disappear into
the country when liberated
& take care of itself. But th
Eastern Turkey, which so is
longer a clear strain, but m
domestic cannot take care o
itself in our Western Mountain
A dozen Eastern turkeys were
liberated in the mts. of northern
New Mexico a few years ago, &
the first night, the coyotes got
9, and the remaining 3 the
following night. Mexicans hun
Bears in Yellow Pines, & Sig
has never seen them out of t
Pine country. He does not thin
they would thrive in Mesa Verde

Carlsbad Cavern, Big Canyon
April 24, 1931, Ligon, Knight, Thompson

desert valley east of the Guadalupes & the Pecos.

We saw 4 Scaled Quail in the lower canyon.

Ligon reported the Mexican Big Horn Sheep up by the base of these cliffs, & all through the east side of the Guadalupes.

Wild Turkey (the Merriam Turkey) used to abound in the Guadalupes. Ligon says they could be re-introduced successfully since yellow pine country & water are there. ~~Has planted a few there.~~

The Means (Fool Quail) Quail is also present although we saw none.

None of the foregoing fine are present in any ~~other~~ national park, except the quail which are at Carlsbad. ~~About 50 Elk (yellowstone?) are planted at the south end of the Guadalupes. They have not increased yet, but Ligon thinks they would do better farther north in the mountains. They were planted about 3 years ago.~~

We saw one deer tracks near mouth of canyon. Mule deer are in the Guadalupes.

Thompson



Carlsbad Cavern Trip
Guadalupes, Big Canyon
Trip with Ligon & N. Mex.
April 24, 1931.

Coyotes are in the nuts. Ligon has seen them band together (2-3 or 4) & pull down full grown bucks in winter. He says they will simply run the deer till it is winded & then kill it. A few Mt. Lions remain. There are also Ring-tailed cats Bob Cats, Gray Foxes, Black Bears, Skunks, Weasels, Rock Squirrels. The Grizzly Bear used to be in the region but is now extinct.

Birds seen in the canyon:

1. Turkey Buzzard
2. Golden Eagle
3. Swainson Hawk
4. Burrowing Owl (outside canyon)
5. Kingbird
6. Scaled Quail
7. Mourning Dove
8. Canyon Towhee
9. Rock Wren
10. Canyon Wren
11. Linnet
12. Cactus Wren
13. Spotted Owl (plentiful, but saw one

# Carlsbad Cavern
## Big Canyon

April 24, 1931 Ligon, Wright & T.

14. White Throated Swift.
15. Broad-tailed Hummingbird
16. Horned Larks (outside)
17. White Crowned Sparrow
18. White-rumped Shrikes (outside)
19. Western Mockingbird (outside)
20. Bush-tits
21. Western gnatcatchers
22. Sierra Hermit thrush

Ligon's mother had reported the day previously, that Rankins are in such number around Abilene Texas that they were a serious menace to all grain crops. They congregate by the thousands in the fields. Ligon thinks they are spreading with civilization just as the coyotes are.

He also reported seeing Aplomado Falcons eat bats. The bats hid under the down turned leaves of yucca out in the desert, & it was there that the observation had been made.

Carlsbad Cavern
Big Canyon
Apr. 21, 1931. Sigon, Knight, Thompson

Speaking of the Black-tailed Prairie Dog, which we saw between Carlsbad & the Cavern, Sigon explained the "pipe hole." The "prairie dog" digs its hole at an angle & removes the dirt through this hole. Then it digs straight up from the bottom of the slanting shaft to the surface of the ground & lastly closes the slanting shaft. This leaves just the "pipe hole" entrance for safety, since a snake would have a difficult time going down a vertical shaft. Sigon does not believe the air chamber escapes during flood, but thinks the dog simply plugs up its hole somewhere underground until the water subsides.

He has seen & caught a few Black-footed ferrets in Prairie Dog colonies. The ferret has a wide distribution

# Carlsbad Cavern
## Big Canyon

April 24, 1931, Ligon, Knight & T.

and may be more plentiful than the few observations & evidences would indicate. This, perhaps, because they are so wary. A few years ago, Ligon bought a ferret from some boys who had caught it in a street in Albuquerque. Whether it had been imported in, or wandered in, he did not know.

He told of a ferret's defeating a large dog years ago, when the ferret had caught it & encumbered by a trap.

Concerning poisons & quail, Ligon said that he occasionally got Scaled Quail from strychnine poisoning set out for sparrows. Therefore he believes that a concentrated poison will kill quail.

Ligon's stand on the Biological Survey's poisoning is this: The coyote is the chief enemy; it is beneficial in its own range & habitat

Thompson



# Carlsbad Cavern
## Big Canyon
April 24, 1931 Sigon, Wright, & Thompson

but when it gets outside of its own range, as it has done everywhere, it becomes a different animal & is harmful. We think that it will have to be held in check by poison. We disapprove of poisoning carcasses & the indiscriminate scattering of poison bait. But we are not afraid of perishable bait distributed in the open country, & high mt. ridges. Sigon admits that every this method will get some other animals, but not to any serious extent & that much is unavoidable. We strongly urge the survey cooperating with local interests, by instructing them in the safe usage of poison.

We hates to see the disappearance of the gray wolf, but see no way of keeping it in this country. We thinks at least Mt. Lions could remain in the Guadalupes.

# Carlsbad Cavern
## Big Canyon
April 24, 1931, Ligon, Knight, & Thompson

Ligon's view of the proposed extension of the Carlsbad National Park is this. Extend a narrow strip of territory, about 4 or 5 miles wide, from the cavern to the Guadalupes, then take in the Guadalupes south to the Pecos in Texas, including the yellow pine country almost to the head of the mountains on the east for peccary, sheep & quail. This would not go north of the Cavern. The region can support a great variety of wild life peculiar to this region, & is of no commercial value. The Lincoln Forest on top of the Guadalupes is already a game preserve. But added protection & reintroduction is needed. Only trails should be built into the region. It is the only wilderness unit area adjacent to all of Texas, Oklahoma, & Louisiana, & is therefore strategically important. for

# Photographs

Carlsbad, Big Canyon, scenery, 2 rolls, with Ligon, Apr. 24, 1931

Ligon's Game Farm, Graflex
Scaled Quail & Prairie Chickens
11 cut films, Apr. 23, 1931

Cavern mouth, Cactus Wren nest, 1 cut film, Apr. 25, 1931

Ligon's Game Farm, 1 roll Prairie Chickens, Apr 23, 1931 Movie

Cavern Mouth, Movie, 20 ft.
Cactus Wren & nest, Apr 25,

# Carlsbad Cavern

April 25, 1931

Tip down bat cave with G.M.H. The cave is approx. ½ mile long 100 ft. wide, and from 50–250 ft. high. The guano has been removed, the last being taken out in 1925. It covered the floor on an average of 8 ft. deep over most of the area, and in some places 100 ft. deep. At present there were many fresh scatterings over about half the length of the cave but very sparse. About ¼ mile in the cave, we began to hear bats squeeking up in the vault ceiling, fully 100 ft above the floor. Our lights were too dim to see them. This one spot was the only place where we heard them. Three shafts enter the cave from above, letting a small amount of light down. They are approx. ⅛ mile apart. The last one is at the rear of the cave. But the cave is so dark, we could not see without our lights. In this end of the cave we found 3 species of spiders (one black with a red dot in the middle of its back; one a "granddaddy long-legs"; and one very small spider); large green

Thompson



# Carlsbad Cavern
## Bat Cave

April 25, 1931

Flies. 3 kinds of beetles; light colored crickets; moths; pack-rat tracks; dead bats, a dead opilogale, under the shaft, (we took the skull, and a dead antilope ground squirrel?; which specimens we also took. It seems inconceivable that so much life could live in such darkness.

Thompson

# Mesa Verde Nat'l. Park

May 2, 1931

Drove from "Square Tower" to boundary of Park, & south into Southern Ute Indian Reservation about 3 miles to end of road, then took trail down Soda Canyon to Mancos River; west along Mancos River about 2 miles, then up north slope of Mancos Canyon to Cliff Dwellings & back across mesa to the car.

Deer tracks were seen all over the mesa top between Soda & Mancos canyons. Rain had fallen 3 days previously, so the tracks were made after the rain, indicating that the deer are on the Ute Reservation still. One deer track was seen among sheep tracks down along the Mancos River.

Gray Fox droppings were seen down in Soda Canyon.

One cat tracks, perhaps Bobcat, was seen in Mancos Canyon.

Mesa Verde
Marcos-Soda Canyon Trip
May 2, 1931

What appeared to be Ring-tailed Cat tracks were found in the sand at the top of Marcos Canyon.

Deer forage was plentiful but not abundant in Cliff Rose & Mt. Mahogany. Some desert grass was growing down in Soda Canyon. Otherwise the forest was just as it is here at headquarters; except for immense sage brush patches down in the canyon bottoms.

Birds identified:

1. Spotted Towhee
2. Chipping Sparrow
3. Gray Gnat-catchers
4. Blue-jay
5. Slender-billed Nuthatch
6. Chickadee
7. Woodpecker
8. Ring Fisher (on Marcos R.)
9. A Mallard duck was reported seen on the reservoir today.
10. An unidentified bird, abundant in Soda Canyon.

Thompson



Mesa Verde Natl. Park
Spruce Tree House Canyon
May 4, 1931
Cloudy & sunny by intervals, just rained.
Birds seen:

| | |
|---|---|
| 1. Magpie | 1 |
| 2. Chipping Sparrow | 2 |
| 3. Mountain Chickadee | 4 |
| 4. Long Tailed Chickadee | 3 |
| 5. Black Headed Grosbeak | 2 |
| 6. Robin | 1 |
| 7. Broad Tailed Hummingbird | 1 |
| 8. Slender Billed Nuthatch | 3 |
| 9. Spotted Towhee (Spurred?) | 3 |
| 10. Unidentified Vireos numerous | |
| 11. Green Tailed Towhee | 1 |
| 12. Finch | 1 |
| 13. Sharp shinned Hawk | 1 |

Thompson



Mesa Verde
Spruce Tree House Canyon
May 4, 1931

1. Sceloporus elongatus caught & identified
2. Sceloporus consobrinus, ditto

1. Otospermophilus grammurus grammurus, Rock Squirrel, 2 seen in canyon east under Community Bldg.
2. Eutamias
Two seen close to Rock Squirrel

Mesa Verde Nat'l. Park
Headquarters to Rock Spring
May 5, 1931. Day cloudy, ground damp.
The forest is the same all the way
except for a square mile or so
of old burn, covered with brush,
mainly some sort of pruneus.
Deer forage is ample everywhere.
One deer track was seen in Long
Canyon about 1 mile east of Rock Spring.

Birds seen:

| | |
|---|---|
| 1. Townsend Solitaire | 1. |
| 2. Blue Crested Jays | 4. |
| 3. Woodhouse Jay | 1. |
| 4. Buzzard | 6 |
| 5. Sharp-shinned Hawk? | 1. |
| 6. Slenderbilled Nuthatch | 2. |
| 7. Audubon Warbler | 2. |
| 9. House Wren | 1. |
| 10. Green-tailed Towhee | 3 |
| 11. Spotted Towhee | #10 |
| 12. Flicker? | 3. |
| 13. Broad-Tailed Hummingbird | #10 |
| 14. Hairy Woodpecker? | 1. |
| 15 Canyon Wren | 6. |
| 16 Rock Wren | 1. |
| 17. Grosbeak Black-headed | 4. |
| 18. White-throated Swift | 12. |
| 19. Mountain Cuckoo | 6 |
| 20. Vireo, unidentified species | several |
| 21. Warblers | .. .. |

# Mesa Verde Natl Park.

From Rock Springs to North Rim & south to Headquarters. May 5, 1931.

Birds seen, continued:

| | | |
|---|---|---|
| 22. | Gambel Quail | 2 |
| 23. | Pratcatchers | numerous |
| 24. | Golden Eagles | 4 |
| 25. | Violet Green Swallow | 10 |

Deer Tracks were seen all across the northern rim of the park. Two deer were seen there but at such a distance, we could not tell whether they were bucks or does. This entire northern region is a wonderful deer country; valleys & protected swales covered with chaparral.

Coyote tracks were seen in 3 places along the north rim, & numerous coyote droppings.

Porcupine workings in the Pinyons stretched clear across to the west boundary along the north rim. Very few pinyons are in that section, but most of them are scarred. Refer to GMG's notes page for details of porcupine depredations.

Thompson



Grand Canyon Natl. Park

May 9, 1931 Around Bt. Angel Canf.

Bright, sunny morning. 6:45-7:45 AM

Four deer seen along trackes. Antlers just velvety knobs about 4 inches long. Winter coat remaining in patches. Deer in good condition. Deer tracks seen everywhere.

Birds seen or heard:

| | |
|---|---|
| 1. Evening Grosbeak | 6 |
| 2. Robin | 6 |
| 3. Chickadee | 4 |
| 4. Piñon Jay | 8 |
| 5. Violet Green? Swallow | 2 |
| 6. White Throated Swift | 4 |
| 7. Raven | 1 |

# Grand Canyon

May 8, 1931

Brown, at the checking station said that trapping was very poor this last winter. Very little snow, pelts not prime.

Relative to his trapping the winter before last, he said that he caught 4 Red Foxes: 2 at Phantom Ranch, 1 at Cottonwood & 1 at the head of Bright Angel Trail on the north rim. Anthony does not give the Red Fox in this region. But Brown insisted that he had caught many Gray Foxes besides these Red Foxes. The question needs investigation.

Later in the day in an interview with Tilleton & Chief Ranger Brooks, Tilleton said that his mind was not definitely made up on the question of Predatory animal control. He said, "We trap every winter & take it for granted, but I'm not at all sure that we are doing the right thing." He feels that scientific work should be done to find out just whether trapping is necessary.

Both men think that Turkeys should be planted in Hermit Basin, Powell Plateau, Head of Bright Angel, north rim, Tonto & water are there.

Grand Canyon
Interview with Chief Ranger Brooks,
May 9, 1931

A ranger has just reported within the last week, seeing a mountain lion just below the canyon wall about 8 miles east of Grand Canyon Village. Brooks is anxious to get it before it gets the tame deer on this side. Brooks estimates 500 deer on the south rim at present. But there were never this many in the past, owing to scarcity of water. Only the water tanks developed by cattlemen have made the present number possible. Brooks would like to try to develop more water holes along the south rim for deer, turkey & antelope. He doesn't have the idea of leaving this arid country arid as it was.

He thinks antelope could be planted over along the west & south portion of the park, where the pinons begin to break away into plains. But he would rather see about 140 sq. miles of this country under a joint agreement with the Forest Service & Park Service, so that the Havasupai Indians could use it for grazing. They have no

Thompson



# Grand Canyon

May 9, 1931 Interview with Brooks.

Possible means of making a living after the park construction work has reached its culmination. Brooks thinks that it would make no difference if the dam did get a few antelope; he could line them up into reasonable hunting, as they have always been willing to cooperate.

The rattlesnakes (two species) in the canyon get along all right, but Brooks thinks the Bobcats keep the lambs down. He says the canyon is full of Bobcats. He also thinks they get some of the Dusky Grouse on the Kaibab. There are not many Grouse.

The Burros are nearly gone from the canyon, although more are on the north side of the canyon than on the south.

The Kaibab Deer story, according to Brooks is as follows. There were not many deer there to begin with. But 50 or 60 years ago cattle were put in north of the plateau. By 1900 the summer grass range was pretty well gone, and the cattle were driven up into the forest.

Grand Canyon

May 9, 1931 Interview with Brooks
At the peak, there were probably 40,000 or 50,000 head of cattle in the region. Then the cattlemen set out to get the mountain lions. Over a period of several years, they took off 600—700 hundred lions; they say 1300. In the meantime the Kaibab had been declared a Nat'l game refuge, & the deer began to increase, until the great numbers reported in 1925.

Brooks thinks there are no more than 16000—18000 deer there as a maximum now, but the forest service still holds to 30000. Over 5000 were taken out last year.

Brooks says the coyotes got 10% of the large fawn crop in 4 months last winter.

He stressed the point that these barren canyon shoulders come from a few deer being held there for perhaps 2 months of the winter, rather than being indicative of thousands of deer. He thinks the range is improving. He does not want the park service to get any of the winter nor intermediate range, but wants some of the plateau summer

Thompson



Grand Canyon

May 9, 1931 Interview with Brooks

range, and the East side winter range to have complete protection of a small part of the deer - just enough for the park.

Brooks recommends gradual reduction of the deer, but thinks the present policy is too drastic.

Trip from Village through South East portion of Park.

May 9, 1931

* Oregon, Wardbury, Park
Natural Forest

Zion National Park

May 26, 1931 Trip with Woodbury on floor of valley. Hard rain all night & every-thing wet this morning. But the season is unusually dry and early this year. No snow on top the rims.

About 10:00 AM this morning rain set in & continued for 2 hours. We saw many deer tracks down along the stream behind the stables, leading up into the canyon which comes in there. The deer cross the stream especially in this locality. The deciduous chaparral is very dense and green in this region, and provide excellent cover & browse for the deer.

Woodbury & others have seen Mt. Sheep in the Carmel Highway canyon. B were reported there in one band. Woodbury thinks they roam all through this rough region.

Beaver used to be in the Canyon. Woodbury is considering whether they could be re-introduced. The area is so small and the shade so important that it does not seem feasible to me. Woodbury thinks it would be well if they were limited to one family. This is the Colorado River Beaver.

LOTTP S 261



# Zion National Park

May 26, 1931 Trip with Woodbury

As we returned through the rain, 11:00 A.M., we saw an adult Water Ouzel feeding a juvenile. The young one stood on the rocks & bobbed up and down, with its stubby tail almost vertical; it kept calling like a faint killdeer note, and spreading its wings as it fluttered them. It could fly quite well. Every minute or so the adult would fly to the young and put some insect or food in its bill. The young one followed the adult closely and kept up its ceaseless begging. It was observed to pick a few times in the water. The adult was not only feeding young but (according to my interpretation) teaching it to forage. The young one's voice was higher pitched & more squeaky than that of the adult. The adult ate most of what it caught. Neither paid any attention to us even when we were within 10 feet of them.

Thom. 7 ps 07



# Zion Natl Park

May 27, 1931.

I drove along up the tunnel road and out to the first road turning off to the left. Followed this about 4 miles out into juniper scrub oak, pinon, service berry and sage brush country. Passed 4 poor shacks. The area is over-grazed by sheep. But there is sufficient browse for deer. The vegetation was of the same character as far north as I could see, which was about 5 miles.

Birds seen this morning:

| | | |
|---|---|---|
| 1. | Red-tailed hawk | 3 |
| 2. | Turkey Buzzard | 2 |
| 3. | Sage Thrasher ? | 15 |
| 4. | Mourning Dove | 12 |
| 5. | Towhee Spotted | 10 |
| 6. | Chipping Sparrow | 10 |
| 7. | Woodhouse Jay | 2 |
| 8. | Desert Sparrow | 1 |
| 9. | Western Mockingbird ? | 1 |
| 10. | White Throated Swift | 25 |
| 11. | Violet Green Swallow | 4 |
| 12. | Gnat Catcher | 4 |

Two kinds of Service Berry were especial
prevalent.

Thompson 132

Zion Natl Park

May 28, 1931 Trip with Woodbury, Dixon & Russell out the west rim trail by Angel's Landing, across the head of Wildcat Canyon & down to Lee's Pond. All of the high country we traversed within the park was good deer country — if there is enough water. Mt. Mahogany, two kinds of Squaw Berry, Jackberry, Mahogany, a near relative of Cliff Rose, Manzanita, Choke Cherry, Sage brush and many other shrubs & grasses were mixed with pinon, juniper & Yellow Pine. Many deer tracks were seen all day.

Jack Hopkins, who lives in Cedar City had about 540 acres of private land in the Park up near the northwest corner, on which he grazes 50 sheep. The sheep have eaten off the forage very badly and the soil is washing down in Potato Valley is eroding away in a deep gulch. This erosion is especially characteristic outside the park. The area north of the park, clear to Cedar Breaks has been grazed for 50 years, and is responsible for the floods & erosion down in Zion Canyon & all down the Virgin River. The water runs off in floods

Zion. Trip with Woodbury, Dixon & Russell out west rim.

May 28, 1931

and then the waterholes & streams dry up. This territory north of the park may have to be taken in sometime in order to protect the park below.

The sheep herder said a Cougar had killed 6 sheep within 2 miles of Potato Valley 4 nights ago. The tracks were not large. He had also seen a few deer carcasses killed this spring.

Woodbury said that about March 1, 1931, Russell & others had killed a cougar & 2 cubs in the northeast corner of the park across the canyon from the sheep camp. The sheep herder also said that he had seen two lions killed last fall in the park, & that he had strychnined the carcasses. But he did not get the cougar.

A Spotted Towhee's nest with 4 young about 2 weeks old was found under a sage bush about 7000 ft. elevation. The young birds scattered into the surrounding brush, although they could not fly. They are a solid gray black. The nest is a round cup of grass. Both parents were present.

Zion Natl Park, West Rim
Trip by horseback from Lees Ranch to
Springdale & up the canyon to the
Lodge. Russell, Woodbury, Dixon & B.H.T.
May 29, 1931 Hot sunny day.

The country steadily breaks off toward the south & west to the Virgin River. The cover is much the same everywhere except that more sage brush flats are encountered. The slopes just west of the park highway and just south of the park boundary are deer wintering grounds & should be in the park. Deer are killed here every winter. The land is not good for much else.

Woodbury collected about 8 breeding toads (Bufo punctatus) in the stream in West Canyon behind West Temple. They breed in alternate puddles & little streams. Water & not temperature seems to be the critical factor, because the temperature was high previous to the rain. They croak while breeding. How they all find water & close their breeding cycle in so short a time is a mystery.

Two species of Horned Toad,

2. High mt. type.

Thompson



Zion Natl. Park, West Rim.
Horseback trip from Lee's Ranch to Springdale & Lodge. Russell, Woodbury Pipes, & B.N.-T.

1. Phrynosoma platyrinos, long horned, low elevation. 2. Phrynosoma douglassii, short horned
Also Collared Lizards, Checkered Race Runners, Desert Scaly Lizard, Stejeners Sceloporus elongatus, and various small lizards, unidentified.

These were all put in a tin can with the horned toads, and a female tarantula which we dug out of a web-lined hole about 8 inches deep. None of the incarcerated reptiles ~~or~~ nor spider injured each other.

No snakes were encountered.
Chipmunks, and Rockesquirrels frequent. Gopher working abundant.
Jack Rabbits & Cottontails numerous in sagebrush areas.
Also, antelope ground squirrels.

Compson

136.

Zion Natl. Park, East Rim
May 30, 1931 Trip in Ford with Russell & Dixon to Deer Trap via Mt. Carmel Highway. Hot, sunny day.

The forage & cover on the east rim was much like that on the west, except for more sage brush. A few small ranches are just east of the park. One plot of 320 acres may soon be sold to sheep owners which will bring sheep that much nearer the park boundary. But no sheep grazing goes on within the east boundary. Some cattle & horses, however, are grazed within the park, up on Deer Trap Point, which is directly over the lodge down in the valley. These animals are not here by agreement but are left there in spite of park regulations. Jolly, the chief ranger knows it.

The point was covered with deer tracks, and one pair of antlers was found which would indicate that the deer was there in February or March. The forage is dense & excellent, much buffalo grass & lupine beside the chaparral.

Zion Natl Park, East Rim
May 30 1931. Ford trip with Russell to Dixon
to Deer Trap via Mt. Carmel Highway.
An old saw mill site lies
about 4 miles east of the point.
The yellow pine (about 3,000,000 ft.)
was logged off in 1909—10.
Young pines are coming back.
so that within the proper time
the region will be restored.
Russell said that forage conditions
within the park were much
better than they had been in
the past. The region had been
grazed for 40 years before he
saw it, & he was first here
in 1902.

He says that in the early days
settlers farmed the river bottom
below Zion & even in it. But
owing to grazing above, floods
washed away the farm land
& the settlers deserted their lands.
They still ranged their cattle &
horses in the canyon. In 1915
a hard winter left no feed. Every
bit of forage was gone from
the canyon anyway, so the
settlers came up in the canyon
& cut down huge amounts of cotton
wood for their stock to browse.

Zion Natl Park, East Rim
Ford trip, Russell, Dixon, to Deer Trap.
May 30, 1931

The canyon & surrounding territory has slowly recovered itself. I think this region is one of the most outstanding examples of the suicidal effects of over-grazing, especially by sheep. Until the damage will continue until sheep grazing between the park & Cedar Breaks is either regulated or prohibited to give the cover a chance to restore. Deep gash erosion is common in all the sedimentary soils & small valleys.

Zion Natl. Park
May 31, 1931

Birds seen or heard in the Canyon:

1. Yellow Warbler
2. Warbling Vireo, nesting in tree about 15 ft. above ground. Nest small, 2" diameter, cup. Male sits on nest & sings.
3. Say Phoebe, nesting under lodge eves.
4. Western Robin
5. Black Headed Grosbeak
6. Flicker
7. Spotted Towhee
8. Gnat-catchers
9. ~~Brewer Blacks~~ Redwing Blackbirds nesting in slough in front of lodge. Nests had young just hatched & eggs. Slough is being filled in.
10. Phainopepla — Rockville
11. Bullocks Oriole — "
12. Scotts Oriole "
13. Tanager, Western.
14. Crested Jay
15. Woodhouse Jay
16. Piñon Jay
17. Gambel Quail
18. Red-tailed Hawk
19. Wood Pewee
20. Broad-tailed Hummingbird

Thompson

Zion Natl. Park

May 31, 1931

Canyon Bird list continued:

21. Black-chinned hummingbird
22. Water ouzel
23. Cassin Vireo
24. Long-tailed Chat
25. Western Kingbird — Rockville
26. Meadowlark — "
27. Lazuli Bunting — "
28. Chestnut-sided bluebird "
29. Nighthawk "
30. Chipping Sparrow
31. Canyon Wren
32. Rock Wren
33. Mourning Dove
34. Road-runner — Rockville
35. Violet-green swallow
36. White-throated swift
37. Desert Black-throated Sparrow - Rockville
38. Lark Sparrow — Rockville to Fen Rock
39. Green-backed Goldfinch — Rockville
40. Song Sparrow
41.

# Rim Hall Park

May 31, 1931

Bird list for Rim Country:

1. Mt. Chickadee
2. Harris Woodpecker
3. Turkey Buzzard
4. Red Tailed Hawks
5. Great Horned Owl
6. Warbling Vireo
7. Cassin Vireo
8. Western Robin
9. Black-Headed Grosbeak
10. Spotted Towhee
11. Green-tailed Towhee
12. Gnat-catcher
13. Western Tanager
14. Woodhouse Jay
15. Crested Jay
16. Hood Pelucker
17. Olive sided Flycatcher
18. Blue Bird, Chestnut sided
19. Nighthawks
20. Chipping Sparrow - nesting in cage.
21. Canyon Wren
22. Rock Wren
23. Violet Green Swallow
24. White-throated Swift
25. Vesper Sparrow
26. Lark Sparrow
27. Junco

Zion Natl. Park

mel, 1931. Trip from head of Tunnell to Bridge Mountain, with Dixon & Scheefer. A cool, slightly cloudy day. Elevation about 6500 ft.

Porcupine & Ring-tailed Cat tracks were seen in the sandy wash just above the tunnel.

A bunch of young Green-tailed Towhees, not able to fly, was flushed up near the top of the ridge.

Over in the valley behind Bridge Mt. was found an unusual abundance of brush, water holes, grass, & rushes with some aspen & yellow pine. The valley is about 1 mile across & 2 miles long. It is almost surrounded by high cliffs, & makes a wonderfully protected natural deer & sheep range both summer & winter.

We saw deer tracks all the way and especially in this valley. Scheefer & I saw 3 deer. They were very wild.

Jack Rabbit tracks were seen all through the area, & 1 Jack Rabbit was seen foraging. We stood still, and it came within 20 ft. of us.

Gray fox tracks were also seen in the valley. Dixon saw Mt Sheep tracks on the ridge by Bridge Mt.

Zion Natl Park

June 2, 1931. Interviews with Woodbury & Cope (Bryce ranger).

Woodbury feels, as we do, that the regulation of grazing on the headwaters of the Virgin is the outstanding problem of Zion Park. He is not worried about the few deer killed just south of the Park, each fall.

Cope said that he thought 8 Mountain Lions were killed by a government trapper in Zion last year — he thought that the extirpation of the sheep interests.

Ranger Force at Zion
Allen — Supt.
Parker — Assistant Supt.
Jolly — Chief Ranger
Woodbury — Naturalist
Harold Russell — ranger
Scheefer — ranger

Bryce Force
Cope — ranger of long standing
Pickthorn — new ranger

# Bryce Natl. Park

June 2, 1931 Interview with Cope.

Bryce is about 18 miles long, north & south, and 3 miles wide, east & west. It runs along the eroding ridge of the Pink Cliffs.

(By the very nature of the area, it is too small to be much of a game habitat).

Grazing has been carried on here for years, as at Zion, and all the area shows the effects very badly. Sheep & cattle are in the Natl. Forest just west of the park, and some sheep will be grazed in the newly acquired park territory this year. There is a demand from the sheep men to kill out the Cougar in the park. The question is an open one still.

Cope showed us an area 1 mile north of Bryce Point where porcupine have girdled a few young yellow pines, and gnawed on many others. Cope was perturbed because this lies along the route of the new road to be built along the top of the cliffs down to the Mt. Carmel highway. The destruction seems negligible to me.

A branch of the Senier River —

Thompson



Bryce Natl. Park.

June 3, 1931. Trip with Cope & Dixon to Podunk Point, 20 miles south of the lodge, at the southern end of the park. Elevation 6200 – 9000 ft. Partly cloudy windy & cool.

Almost the entire trip lay in a long valley which looks much like N. I. Park. A good stream runs down the valley to the north. There has been an abundance of grass, but it has been overgrazed for years. We saw about 40 head of cattle there. The valley is rimmed with yellow pine, blue spruce mostly limber pine, white fir, & aspen. The stream would be the best boundary for the park, but the Forest Service wanted a surveyed line which zig-zags by cutting up through the timber & will always be a source of trouble from grazing. The park wanted a game preserve declared down to the little stream, but ran up against great opposition from sheepmen & sportsmen.

A cattle herder whom we saw said he had never seen so little water in the stream before, nor so many porcupines. He had

Thompson



# Bryce Natl. Park

June 3, 1931. Podunk Point trip with Cope & Dixon.

seen 10 porcupines crossing the road out in 3 days. Cattle men & Forest Service rangers kill porcupines whenever they see them, & are instructed to do so.

From Podunk Point, we looked down into a pine, aspen & chaparral clad valley on the east side of the cliffs. This is partly in the newly acquired park territory, and here sheep are to be grazed under Forest Service supervision. 2700 sheep graze in this area. Cougars range around the rim here, and are said to be a menace to the sheep. The sheepmen want the Park Service to trap & otherwise kill the cougars in order to make sheep grazing in the park, & adjacent to it, safe. No action has been taken yet. I, personally, see no justification for such a move.

Cougar trapping here last year resulted in 1 cougar being caught. It was still lying across a log near the natural bridge

Bryce Natl. Park
June 3, 1931. Podunk Point trip
with Cope & Dixon.

Cope said that most of the traps contained dead porcupine No. 4 Coyote traps were used. Mr. Dixon is in favor of hounds here to possibly the sheep men, on the supposition that few cougars would be caught. On the other hand, if sled traps were used, no cougars might be caught & the porcupine controlled simultaneously.

The reason this seems unjustifiable to me is that a strip of land 3 miles wide & 20 miles long, could not be a serious breeding ground for roving animals, especially where they are hunted all around this narrow strip.

Biological Survey hunters were here last year, but got no lions, so far as we can find out. One of their signs was still posted at the natural bridge. We took the sign.

Mt. Bluebird nest with 5 eggs found in dead stump in valley, el. 8300 ft.

Thompson



# Bryce Natl. Park

June 3, 1931. Podunk Point trip with Cope & Dixon.

Cope says that the sheepmen are very hostile toward the park extensions. They feel that their birthright is being taken away from them. Yet they have overgrazed the whole territory to such an extent that one man was heard to say, "We would be better off if we sold half our sheep, & bought them back ten years later."

The entire valley between Bryce & Navajo Mt. (Paiyeah River Valley) is grazing sheep & cattle country.

The view from Podunk Point is magnificent.

Perhaps, within a few years, all grazing may be eliminated from the park. But at present, that was the only way the territory could be acquired. Henderson is the man who grazes the 2700 sheep in the park.

Thompson



Zion Canyon Natl Park

June 24, 1931 Interview with forest supervisors office in Cedar City. The supervisor was out, & the man I interviewed seemed as "cool" that I did not learn his name.

60,000 sheep graze on the headwaters of the Virgin River. Land there is about $10.00 per acre, or the price of a ewe. This would put the investment in this critical area at $1,200,000. appropriately. The land is all privately owned. About 35 individually owned ranges are in the area.

Cougar are worse now than before; it is thought that the road blasting down in Zion has driven them into the bare country. The Biological survey assists in the control of cougar. The ranchers poison dead horses in the fall & distribute them. They claim to get some cougar this way.

Not many deer are in the region. But more sheep are grazed than ever before.

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It rained all day on Cedar Mt. & drove over from Bryce. Many marmots were out.

Thompson



# Kaibab Plateau

June 6 —

Birds found on the Kaibab

1. Robin
2. Chipping Sparrow
3. Red-backed Junco
4. Crested Jay
5. Ruby-crowned Kinglet
6. Purple Finch (Cassin)
7. Mountain Bluebird
8. Raven
9. Pine Siskin
10. Western Tanager
11. Slender-billed Nuthatch
12. Evening Grosbeak
13. Red-shafted Flicker
14. Audubon Warbler
15. Red-tailed Hawk
16. Violet-green Swallow
17. White-throated Swift.
18. Wood Pewee
19. Cassin Vireo
20. Olive-sided Flycatcher
21. Black-headed grosbeak
22. Western Gnatcatcher
23. Warbling Vireo
24. Hermit Thrush
25. Pinon Jay

Thompson

Kaibab Plateau

June 6, 1931 Cloudy day, 3 days after rain.
Cliff Rose & Mt. Mahogany were in profuse bloom as we came up the north side of the plateau. All the chaparral was intensely thick & green, but it all showed heavy browsing as high as deer or sheep could reach.

Only 1 deer was seen before we reached VT Ranch. There a herd of 30 were grazing in the meadow. By 7:00 PM, 96 deer were counted in the meadow. Grass is everywhere green but short. The water holes are numerous & full. The deer are in good condition. Short velvety antlers about 6 inches long are showing on the bucks.

une 8, 1931 South Canyon Trip.

First stop. Examined ground cover with water development in view.
miles east A few very fine aspens seen in
V.T. right place. Grades good. Conditions present. Young aspens show browsing in several periods, few years back.

2nd Hike thru wood to rim of South Canyon overlooking Corrals & end of Honey rock valley. Snowbush almost killed off everywhere but coming back. Few small aspens 4" high. Numerous deer tracks showing deer still on east range. Horse & cattle tracks also. No grass. Forest too dense for much brush. Local says it is Mt. lion haunt. From Idaho say that aspen is not browsed in Idaho, but is here, due to scarcity of range — it is relative, Small dwarf ceanothus (~~Fendleri~~) heavily browsed. Not plentiful.

June 9 Sawtooth Point Trip

1st Stop. Sample Plot 3 miles west of VT on old Ryan Road. 3yr. plot enclosed. The (1927) little Spruce reseeding up vigorous leaders as high as stubby part below. Young aspens 3 ft. high, suckers, vigorous. 18 aspens in plot 40-40' approx. Grass looks about the same.

2nd Yellow Pine Forest. ground almost bare; small yellow pines browsed severely until some dead. trees 3" diameter only 3 ft. high or bushy.

3rd Klazy Jug Point overlooking Powell Plateau, Big Thumb, Thunder River, and Havasupai region. Cliff Rose, Service Berry, Gambel Oak browsed clean as high as deer can reach. Sage Brush eaten back to half its former height. Junipers browsed clean as high as deer can reach. Region looks like Point Sublime. 600-700 cattle graze here every winter. Brooks say they left about 1 month ago. Whether the brouse is coming back very gradually is not exactly evident. Possibly it is.

4th Sample plot & open plot laid out in 1927. The enclosed plot shows good recovery of sage brush, Cliff rose, & grass. Sage & Cliff as high as can

Indian Pollock
(Lunch)

Dr. E. Raymond Hall, U. C. Berkeley
Paul Rabbington, Chief, Bureau of Sport
Cooke, Kansas Nature League?
G. Gilbert Pearson, Ex. Sec. Nat.
Audubon Soc.
Robt. Cooke, Bronx, Audubon & N.Y.

Nov 9 Squaw Point Trip

open plot. Young cliffrose coming in.
From here for 3 miles country is all
gambel oak, browsed high as deer
can reach but coming back under-
neath with new leaves. Upon ridges
cliffrose predominates & is so browsed
that the hill looks like cactus grove.
Junipers & pinons & few yellow pines here.
4th Sample plot. Grass knee high &
abundant, outside grass short & sparse
Grasses present, rice grass ~~abundant~~
long spear grass, and foxtail. In this
plot 5 cliffrose browse recovered, 8
died. Mallow abundant in plot.
Region around plot severely browsed
with half of cliffrose dead. Erosion
outside of plot noticeably more than
in plot.

Here there was a conference held by Locke,
Hall, Dixon, Anderson, & Reddington. Locke
expressed the opinion that any "Balance" in
any area will have to be man-made, or
an ideal which man will determine.
No area can escape the outside influence.
The Trumpeter Swans were especially
mentioned by Locke as examples of
upset conditions where intervention
is absolutely necessary. No area is
uninfluenced today. "Primitive Areas"
in the Forest Service parlance does

not mean a "natural" area: it means an area where industrial developments are held to a minimum, and the "game" is the primary use. They do not consider a ~~park~~ "Wilderness Area" as a scientific laboratory, as Hall had considered it.

From here we back-tracked 3 miles & headed somewhat north & west for several miles. The range had been severely browsed but seemed to be leaping out again as though the pressure had been diminished during the last year or two. Sage brush, oaks, & service berry were showing good progress. Very little cliff rose was evident, & it was badly browsed.

In closed sample plot 30'-30' Vegetation, sage brush, cliff rose & juniper show good growth, but not much better than that outside (sagebrush) except cliff rose & juniper which show heavy browsing outside.

Everywhere we have seen the oaks in the ravines coming back, whereas on the ridges, where cliff Rose predominates it is heavily shattered.

Mann, Rudolph Jonet Superintendent

7-8 Approaching Dowds Point. For miles in every direction the cliff rose and juniper are simply skeletons. Few fires seen such devastation. However, grass here is knee high & abundant. Many of the men say it is due to the killing of the brush, thereby giving the grass a chance. Many say there is no summer grazing due to lack of water, & what grazing is only in spring & early. This is, perhaps, the governing factor.

9. Dowds Point. An old burn. But junipers & pinon are 15-20 ft. high, although scarce. Pinon is browsed about 5' high, & next to it juniper is browsed 8-10 ft. high. Evidently the pinon is only taken as a last extremity. The cliff rose is mostly dead.

10 Two short stops enroute home to see enclosed sample plots showing yellow pine & aspen development. The aspens were 18"-24" high, about 5 in the plot, and the yellow pines had hardy leaders as high as the scrubby part below.

June 10 To Jumpers and Slide

1st Stop About 18 miles northwest of VT on old Ryan road in open Yellow Pine forest. About 20 little aspens 3-6" high seen in 200 yds. walk, 6 little yellow pines about 2-4 yrs old 4" high, some oregon grape & a little very short grass. Ground is mostly bare except for brown needles. Mann says the young aspens are not eaten till August & fall. In fall, cattle & deer eat the fallen aspen leaves almost entirely, & some oak leaves. A very few small locust shrubs are present. The yellow pines 1-3' ft. high are stubby & bronzed.

2nd Stop Big Springs deer trap. The trap is a maze of inclined lanes leading to the final pens & chutes which are dark, & quiet the deer. Big bucks are dehorned here & loaded. The cost is $5.00 to $7.35 per head, according to the number shipped.

3. Sample plot near deer trap along drift fence. The weed & grass growth is rank in the plot — outside very low & almost bare. The cattle are held below the fence until later summer when they are allowed to go upon the plateau.

June 10, 1931 To Jumper
4 Out on the northeast slopes where we can look east & see the Kaibab Plateau as a wall several miles away. Sage & juniper country. Passed some cliff rose on the ridges. Sage & juniper well browsed. This is the Buckhorn trail, and the stop is Willow Canyon.

The range from here spreads out in to a large expanse of rolling hills & ravines, couched with sage brush & junipers, all browsed very noticeably.

Lunch at Slide, near Jumper.

Returned over ridge where the cliff rose showed great denudation. The last 2 yrs. didn't show so much. But the improvement is very slow.

After this we came upon top of the mountain & passed through the yellow pine & spruce forest which was the same as it is along the main highway. In the small valleys, grass was very short, & almost every one showed ~~negro~~ headward erosion.

Goldman - Biol. Survey

Sabrucker example prot
outside plot.
Ask for Nelson's dam
mile.

June 11, 1931 North Side Trip

2nd stop 0 miles north of VT.

A 20'+20' plot fenced in 1925 5 aspens from 5'-9' high, and 5 smaller aspens. Goldman says that in 1917 this was the condition of the forest everywhere. One cyclops pine 1" in diameter and 8 ft. high, as compared with some stubbrowse outside 2" diameter and 2 ft. high. The check plot close by shows no aspens at all.

Some good stuff. Raspberry actually here.

1. 40'+40' plot with 11 aspens ranging up to 2 ft. high. Spruces show good leaders. Nichols counted 7 seedling spruces within the plot, not seen anywhere outside.

3. Plot #36, fenced August, 1927. On the edge of the sheep range, on Castle Canyon road. Aspens 10 ft. high. ~~The aspens~~ 20 clumps of aspens almost filling the plot. The yellow pines have grown a foot in one years time as shown by leaders. The usual scrubby stuff outside.

4. Plot #37. Nelsons Saw Mill. Wild rose in this plot. Several comment that wild rose is a great favorite with deer. The pine leaders outside are untouched for the last 2 yrs.

Cliffrose

June 11, 1931 North Side Trip

Dixon reported a parasitic growth on the Cliff Rose east & north of Jacobs Lake. We missed this trip.

In the afternoon we drove to the north foot of the hill, turned left at the gas station & drove to Ryan. Several miles of the way are out of the present Kaibab Forest, but in the National Game Preserve which used to coincide with the Forest Boundary, as set aside by Pres. Roosevelt but owing to a readjustment of the Forest Boundary, these strips of Game Preserve extend north of the Kaibab Forest. None had jurisdiction over the game preserve portion of the forest and sheep winter there to the extent of 45,000, according to Mann. The same "high water" grazing line is present here as on the Coleb winter range. The growth is: sage brush, juniper, cliff rose & some pinon.

From the Preserve to Ryan, the vegetative cover is the same. And from Ryan to VT, is covered in June 10th notes.

June 12, 1931 Powell Plateau.

The delegation drove to Powell Saddle, where horses were procured & we rode over most of the plateau. The Saddle is about 1000 ft. deep. The slopes are a mass of gambeloak, serviceberry, manzanita, garrya, and cliffrose. All shrubs in the Saddle show some browsing, but not to a serious extent.

Powell Plateau has a long yellow pine forest over most of it. But all of the south & west sides are juniper, cliffrose, gambeloak, serviceberry, & cliffrose & sage, with a mixture of grass. Here is the usual "high water" line as severe as anywhere else.

Some cattle & mule horses are on the plateau, as evidenced by tracks, and deer tracks were numerous. The deer must go without water here. E. R. Hall says he is certain that bucks and barren does go 4 weeks without water.

Three springs are in the canyon just south of Powell Saddle, but too far from Powell Plateau to be watering places for deer there. Where the cattle drink, I do not know except at the springs.

# East Side Kaibab Range

June 14, 1931

Houserock Valley was exceedingly bare. Almost no grass higher than a low cropped stubble. Some stubbly scattered stuff toward the upper edges of the valley, some very low sage brush. As soon as we entered the National Forest the grass was noticeably higher & more abundant; in many places it covered the ground. Up in the Juniper & Pinon region very little browsing was evident.

Mr. Robert Parker, Ranger says that 200 cattle winter within the National Park. Mr. Wooley has the majority of cattle there & is the biggest offender. Mr Findlay is most anxious to cooperate. Wooley's cattle are in the east side of the Park, above and east of South Canyon. There are no grazing permits nor obligations on the North Rim of the Park. Cattle are very difficult to get out of the park.

Thirty-six head of Buffalo were seen near Kane. They were shedding their light brown winter coat, which hung down in rags and shreds, a foot in some cases.

Solinsky, N. P. S. land purchase

Thompson



Rocky Mt. National Park
June 23 1931 Trip to Horseshoe, Beaver, and Moraine Parks with Solinsky, Madsen, Dixon, & M.M.

Solinsky is trying to buy these parks, as well as Lower Black Canyon, for elk winter range. There are extensive private holdings in each.

Solinsky counted 255 elk in Beaver Park last winter. The winter range is heavily overbrowsed. Pinus on the sunny slopes between Black Canyon & Horseshoe Parks is almost entirely gone. Ribes, nine-bark, ~~[illegible]~~ are heavily browsed. The aspens have a distinct highwater line, the young stuff is kept down, the young yellow pines are browsed to death and very little grass remains.

Horses are grazed in Horseshoe & Moraine Parks. They are natural grass & willow areas, & the natural winter range of the elk. If horses are removed during the summer there would be much more winter forage. Beaver, Horseshoe, & Black Canyon will probably be acquired soon. Moraine may take years.

# Rocky Mt. Natl Park

June 23, 1931

Beaver, Moraine, Horseshoe, & Black Canyon trip with Solinsky, Madsen, Dixon & Knight.

Black Canyon has an abundance of ribes, nine-bark, sage, willow & aspen. It is good elk & deer winter range.

Beaver has good grass, & willow. It seems to be the main wintering grounds for elk & deer & is most essential to the park.

Last winter, elk began stripping the bark from aspens all the way from Black Canyon to Horseshoe & for several miles up the Fall River road, indicating a serious lack of forage, and last winter was mild. Either the elk herd must be reduced or more winter range acquired. Even when these 4 parks are acquired the herd must be held to or below its present number. Only experience can determine the carrying capacity.

Two sheep were seen at Sheep Lake. They stay here through winter & spring. Deer tracks were abundant everywhere.

Rocky Mt. Natl. Park

June 25, 1931 Trip with Madsen Dixon and G.M.N. to Sprague & Hidden Valley to see Beaver works.

The situation at Hidden Valley is this: The road has been built along 3 beaver ponds. The whole beaver lay-out is an unusually fine "show" for tourists. Beaver have been in this valley for at least 130 ~~years~~ years, according to Sprague.

The aspen and willow are about gone. So it is evident that the beaver will eat themselves out of the valley within a few more years. 3 enormous houses are in the 3 ponds. Probably each house contains more than one family of beaver. The park would like to hold the number to one or two pairs, so that there would always be beaver along this road.

We all agreed that in this one instance it is perhaps justifiable, provided no precedent is made, and the beaver elsewhere in the park are not "managed."

At Sprague, the beaver have a pond close to Sprague's house. The aspen & willow are kept down but a good supply of aspen regro

Rocky Mt. Natl Park.
June 25, 1931 / Sprague & Hidden Valley

is taking the place of the old. Sprague trapped 6 beaver out of his water supply 2 years ago, & has not been bothered since. The beavers near his house are an attraction, it seems to me, and can afford to have the aspen.

Madsen found no fish food in any of the streams nor lakes, except Sprague's last fish pond. He suggests putting fresh water shrimp in all these streams for fish food. He is willing to save a few streams & lakes for the native fish, with a reduced limit, provided the main streams & lakes are devoted to quantity production of the best trout. This is J. M.'s suggestion.

June 24, 1931. Madsen, J.M.H., and I visited the fish hatchery. They have good hatching facilities but no ponds, except 11 small ones, to rear them to 6"-9" size before planting. Consequently there is no great loss from planting 2 inch fish which get eaten up before by larger fish

Thompson



Rocky Mt. National Park

June 25, 1931 Sprague, ~~Bear~~ Hidden Valley, and Fish Hatchery.

large enough to be of any value. Fishing is very poor in the Fall Thompson and other rivers of the park. More fish food and rearing ponds are essential to fish production on a large scale. And if fishing is to be allowed in the parks at all, it may as well be made good fishing.

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# Rocky Mountain Nat'l. Park

June 27 & 19/31

Trip through Never Summer Range on horse back by G.M. Dr. & B.F.V. Elevation 8500 — 11000 ft. Showers intermittent.

The valley of the Colorado above Scotty's Dude Ranch (Phantom Ranch) is a willow marsh for 6 miles. Spruce, Doug Fir, Lodge Pole Pines present. Good grass. Two Beaver ponds but Beaver seen, probably more present. Two small (meadows with dilapidated log cabins & barns. Scotty's horses graze up in here, but no browsing is evident.

Deer: Fresh deer tracks were in Scotty's yard. 4 had been seen there the previous day. Two deer seen in willow thicket 3 miles north of Scottys. 4 deer seen up toward Ditch. Deer tracks seen all along trip. This whole Never Summer Range is the most ideal deer summer range I've ever seen. Plenty of water, shelter and an abundance of shrubs, dwarf blueberry, grasses. It is a lush undergrowth, and would make wonderful Elk summer range.

Elk: a band of 47 was seen in Poudre Pass last fall. None go into the Never Summer Range. But

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Rocky Mt. Nat'l Park
Never Summer Range
June 26, 1931

I think that elk will occupy the N.S Range when the Poudre Park herd increases enough to spread. But if they do, there will be a serious question of winter range. Scotty thinks the Colorado valley would make excellent elk winter range, but we can find no record of their ever wintering there on account of too much snow. A man at the saw mill, 10500 elevation said snow was 7 ft. deep on the level last winter. This is 1500–2000 ft. higher than the Colorado valley, but the snow is 4–5 ft. deep in the valley. Abner Sprague says elk used to winter down below Grand Lake near Flat Top Mt.

Bear: Scotty says that last fall 4 bear crossed the valley just below his ranch. He thinks there may be 10–15 bear in the Devils Kitchen Pocket just west of above his ranch.

Grizzly: a year ago last fall, Scotty saw a grizzly track 16 inches long 5 miles above his ranch. He tracked it up toward Specimen Mt. & then lost it.

Mt. Sheep: all the tops of the

Thompson



# Rocky Mt. Natl Park
## Never Summer Range

June 26, 1931

Never Summer Range are wonderful sheep country, open grass land + rocky crags in abundance. Scotty says Mt Sheep are not in the NS Range, but the man at the saw mill says they are scattered all along it.

Scotty + other trappers, all, reported having caught weasels, mink, red fox, weasel, and coyote in traps, but no fisher, which they think are not here). Scotty thought a few wolverine remained although he had never caught any.

Domestic Sheep graze up as far as Poudre Pass, but do not come into the park.

The Ditch: a canal following the 10500 ft. elevation flows across all the watersheds from the south side of Howard Mt. to + over Poudre Pass to the north, + another one from the Specimen Mt. Watershed to the east side of the Colorado. These two canals take all the permanent and flood run-off of the upper Colorado Water shed over to Ft. Collins for irrigation. The canals drain

Thompson



# Rocky Mt. Natl. Park
## Never Summer Range

June 24, 1931.

about 22 sq. miles of the best high int. country. Not even enough water comes down the Colorado to keep fish by the Phantom Ranch. The normal supply of water is supposed to be sent down the Colorado, but even flood gate in the canal was closed.

The Never Summer Range extension is very scenic and a fine place for horseback trips. At present it is not of great value for game, but it will very probably become a great elk and deer country. It follows a natural boundary and serves as a better game refuge than the old boundary. Some arrangement, whereby the normal water flow can be obtained in the Colorado, must be sought.

Rocky Mt. Natl Park

Lawn Lake Trip June 29, 1931

Sunny until noon, then showers rest of day. Elevation Horseshoe Park 8500, Lawn Lake 11,000, Divide between Hague & Fairchild 12,300. Trip was to top of divide and back.

The first steep climb out of Horseshoe Park goes through forest with considerable underbrush: Ribes, Mt. maple, aspen, & grass, & flowering Raspberry. Up in Roaring River valley is dense growth of pure lodgepole thickets with very little underbrush, and pure aspen stands with an abundance of golden pea, & grass, and the mixed forest with a scattering of underbrush. The grass, brush, & pea growth is so lush, that it would make fine elk summer range. No signs of elk wintering in Roaring River Valley.

Lawn Lake is just at timberline. There is an old burn of 3-4 sq. miles below it, with sparse repro, and some brush. Above the lake, the high mt. grassland begins. From the divide we could see wonderful mt. sheep country above timberline, stretching to the north boundary of the park, & on the east of Hague Creek. Northwest of the divide, Hague Creek breaks down into a long forested valley, which joins the Poudre, over in the northwest corner of the

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# Rocky Mt. Natl. Park.

June 29, 1931 Dixon & Thompson, Fawn Lake park. Many snow patches still hung on the mountains, and Crystal Lake was half frozen, still. Wild flowers, blue & gold, were in profusion on top of the divide. Grass plentiful. Pipits were feeding in snow banks, and singing their flight song. Bluebirds, white crown sparrows, Lewis' Woodpeckers, and Ruby-crowned Kinglets sang everywhere. We saw about 15 redfish brown marmots.

Deer tracks led to the top of the divide.

One Chickaree was at the cabin 11,000 ft. elevation. One Audubon Warbler.

Concerning the foregoing & elk, it must be noted that no elk sign was in the valley. Probably elk, if any were there, were upon the ridges, where they stay in summer time.

Rocky Mt. Natl Park

Dixon & Thompson. June 30, 1931

McGraw Ranch, to divide overlooking West Creek, then up ridge to the west, around first 10000 ft. peak, & return by Cow Creek.

A hired man at McGraw's said elk winter right at the ranch. They have seen 100 head there ~~at~~ in one bunch in the winter. In the summer, elk & deer range upon the ridge toward Mummy Mt. where we are hiking.

Upon the ridge a mile northwest of the ranch, el. 8500–9000 ft. the young aspens show quite a bit of summer browsing. Ninebark is plentiful, Rocky Mt. juniper, limber pine, & lodgepole beside bunch grass & golden pea, dwarf manzanita matted all over the ground.

One 5 point deer antler was found there, indicating deer here in Feb. & Mar.

Coming around the first 10000 ft. mt. we turned back into Cub Creek Valley & headed for McGraw's Ranch. Here we ran into the real elk winter range. On the south facing slope is a great deal of Persia Canadensis, ribes, wild rose, young aspen, ninebark, and grass & flowers. The aspens have a distinct "high water" mark, but nothing else shows severe browsing.

Rocky Mt. Natl Park
June 30, 1930, McGraw Ranch Trip.

About 9000 ft. el. on this same slope, we saw a very large male grouse, which flew out of sight. It was very dark with light neck patches & white tip of tail.

All the way down the slope, about 2 mi., we followed elk trails. Elk droppings were all over the ground. One deer was seen.

In the bottom of the valley, along Cow Creek, is a thicket of aspen, willow, alder, rubes, wild rose, ninebark, juniper, ferns & grass. It is ideal for elk in winter & shows very little browsing. The entire winter range here is in good condition.

5 chickarees seen during morning.

Birds identified:

1. Hermit Thrush
2. Ruby-Crowned Kinglet
3. Warbling Vireo
4. Crossbill
5. Crested Jay
6. Robin
7. Bluebird
8. House wren
9. Siskin
10. Flicker

Thompson 176.

# Rocky Mt. Natl Park

June 30, 1931. McGraw Ranch Trip

General Remarks:

The general summer range of the elk here is up toward Mummy Mt. on the headwaters of Cow Creek, & West Creek. There is a good bit of aspen interspersed with the conifer forest. A large old burn in the Cow Creek water shed is filling with young aspen, conifer and brush. The elk trails lead up through this. In the fall the elk come down to the aspen groves, and in Jan—March they winter around & below the ranch.

Beavers are plentiful in Cow Creek. Around the ranch they are considered a pest on account of their ditches in the hay fields. Three were trapped out last fall, but others move in soon after.

The McGraw Ranch used to be within the park but it is outside of the present boundary.

I think this winter range should be acquired, by all means. It is away from civilization & would not cause half the complications that arise near Estes Park. Besides it is better winter & summer range.

Deer tracks everywhere.

Thompson Elk Range Elevation 6500

177.

# Grand Teton Nat'l. Park

July 8 1931.

The Yellowstone southern herd comes through the Teton boundaries and down the valley of the Snake River in fall. In mild winters they may linger through November and December, before going on down to the town of Jackson. A few elk remain in the park during this time, but the majority spend the fall on the low grass & aspen hills east of the river. None forage out in the sage brush valley.

As we drove from 4 miles south of the Snake River Bridge, over the Slide Road, through Kelly, to Elk (8 miles east of Moran, we saw numerous fences & sheds being taken down, on the places purchased by Rockefeller.

Superintendent Hodgdon thinks this should all be within the park to protect the elk. I don't agree with this view because the elk have to be controlled, and there is no advantage to the park to be gained in this added responsibility; but it would seem advisable to have park control in this area outside of the park

in order to avoid the duplication of agencies existent on the Kaibab this very situation seems to point to the necessity of a new park function; namely, that of a park, regulated area adjacent to the park in which control measures may be practiced when necessary without violating the park proper.

The elk used to winter normally down below Jackson in the [illegible] but have been fed so long in the govt. feed yards that they no longer go farther than Jackson. The [illegible] is very heavily grazed by sheep, now, and has been for many years.

Grand Teton Nat'l. Park

July 7, 1931 Trip up Glacier Canyon.

The trail west of Jenny Lake goes through wonderful forest with dense underbrush. Moose tracks were numerous. 12 Chickarees were seen & heard during the days trip.

No trail leads up into Glacier Canyon but a moose trail may be found here and there. Moose tracks & droppings were very numerous.

The creek runs almost level for about 5 miles in the canyon. The floor of the canyon, about ½ mile wide is a solid thicket of willow, grass, and swamp. The talus slopes are covered in patches with dense chaparral growth. Ribes abounds everywhere, also shiny leaf ceanothus (velutina), and other members of the prunus family which I could not recognize. Ribes, & wild raspberries, & wild rose, were numerous. This canyon is an ideal fall range for moose.

Marmots seen at 7000 ft. were still dark red & bushy. Both Wright and Dixon both reported black ones at the 10000 ft. elevation.

Coneys were there by the thousands.

Grand Teton Natl. Park

July 8, 1931 Emma Mathilda Lake

Trip by Wright & Thompson

The lake is a crescent shaped lake about 3 miles long. It has no inlet, but an artificial outlet which has drained the level of the water about 2½ ft. lower than its normal level. This has left a shoreline which is bare cobble stones most of the way, but in spots 1 mile long around the southeast end, and about ½ mile at the north west end there are cat tails and marsh grass extending out 200 ft. in some places. The lake is quite shallow. Moose & deer tracks were all around the lake. 6 Coyote tracks were seen at intervals around the lake. One black bear was drinking on the south margin. A family of ravens, 4 Calif.? Gulls, and a family of 5 small merganzers, and 2 separate female merganzers were seen. About 10 pairs of killdeer, and 10 pairs of spotted sandpiper were encountered. One baby sandpiper just a week or 10 day old was seen. 14 Trumpeter Swans were feeding out in the middle

Grand Teton Natl. Park
July 8, 1931 Emma Mathilda Lake.

of the lake. They kept in distinct pairs. One pair was noticeably smaller, perhaps last years young of the old pair. We made the complete circuit of the lake shore & found no nests nor swan nest sites. 8 deserted beaver houses were left either at the edge of the water, or high & dry due to the lowering of the water level. They seemed to have been deserted several years ago. Immature Swan feathers, wing primaries, secondaries, & tertials, were found at intervals around the lake, putting the molt previous to July 8th.

Tracks, resembling muskrats, were seen in abundance in the mud at the south east end of the lake.

The south boundary of the lake is lined with heavy forest & underbrush; the north side, with open aspen, brush, & grassland. The lake is not an ideal swan nesting place, but is ideal moose and deer country. 2 does were seen

Grand Teton Natl. Park
July 9, 1931, Emma Matilda Lake

Two Ocean Lake ~~was~~ lies about 1 mile north of Emma Matilda. It is a reservoir with a dam at the south end. No swans were reported on this lake, & we were too late to see the lake.

As we came to the sage brush of the Jackson Hole valley, about 1 mile east of Emma Matilda, we flushed a family of 4/4 grown sage hens & young.

I feel that every bit of this country south of Yellowstone Park, from the Thoroughfare, Wind River Cliffs, down to & including Jackson Hole and the Tetons, should ~~be~~ comprise one national park with Yellowstone. It is scenically outstanding, and is a game unit — at present cut in half. It would probably need 2 administration centers, but should by all means, be one big park. It seems like the only large area available for one complete game area.

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# Grand Teton National Park

July 7 10 and 12, 1931

Trip to Bailey Lake about 2½ miles northeast of Johnson Ranch. Trail, none, but way lies through dense lodgepole forest with thick mat of grass, lupine and dwarf blueberry on ground. The lake lies in a swamp 2 miles long and ⅓ mile wide with dense marsh grass knee high. A few cattails remain in a few scattered bunches, and the marsh stream is full of water lilies. The lake is shallow. A floating muskeg about 100 ft. long at the south end of the lake. Swans might nest there if tules were available but there are none, and Fessler has never seen swans on this lake. 2 Beaver lodges were on the lake, with beaver trails leading out toward the willows surrounding the swamp.

A loon and one young were swimming on the lake. Two female mallards were seen.

Grand Teton National Park

July 13 1931 Trip to lake ¼ mile east of Leeks' Camp. This lake is about ¾ mile long very shallow and entirely covered with lily pads. The water is lower than it was last year. Mr. Lawrence, caretaker of Johnson's Ranch, saw swans with 4-5 young there last year & the year before. There are none on the lake this year. Food, nesting sites & nesting material are abundant but the water is too low and covered with lilies to be suitable for swans this year, we deduced.

A Barrow's Goldeneye with 3 young perhaps 2 weeks old were swimming on the lake.

A Beaver House 35 ft. across & 10 ft. high stood in a narrow neck of the pond. This is the largest one I've ever seen.

Trip to Beulah Lake July 13, 1931.

That afternoon we drove over the old Ashton freight road, 10 miles from the Snake River, to Wagoner Lake & Grassy Lake. One mile east of Wagoner Lake, we took the trail to Beulah Lake 3½ miles north, in Yellowstone Park. The lake has some tules, lilies & marsh grass, but no swans, nor nests. Fishing (native Cutthroat Trout) good. Caught 1 two lb. fish. No swans on Spring Lake, Ivan Lake, Wagoner, nor Grassy.

Buffalo shedding winter coats still, a
1/3 of each coat shed by this date.

2pSo7

# Yellowstone Natl. Park

July ~~18, 17, 16~~ 15—17, 1931

Trip with Baggley, Chapman, Douglas, + Wright, horseback from Buffalo Ranch up Lamar River 4 miles east Soda Creek, then up hills to north of Lamar River, about 5 miles, back down to Lamar, + up to Miller creek cabin 12 miles south east of Buffalo R. Next day, up Miller Creek 10 mi. + back + home to Buffalo Ranch, via timothy hay fields south of Lamar. Distance, 48 miles.

Horse flies attached the horses, all the way + as many as 25-30 after each horse simultaneously.

The grass on the summer Buffalo range is abundant and rank + has high for miles. Many large meadows abound with deep forest clumps interspersed. Lupine, pink Geranium, dwarf blueberry, sage brush + grass are common on the Buffalo summer range.

We saw about 500 head of buffalo cows and calves. The Bulls are still away by themselves. In the first band of buffalo 3 miles east of Soda Creek, we counted 40 adults, + 6 calves. This was the only ratio count we could get all day. Other bands were seen up about 8000 ft. elevation in open meadows. They all ran into the forest.

Many lodgepole pines were barked from buffalo + elk rubbing. Many aspens

# Yellowstone Natl. Park

July 15—17, 1931. Buffalo range, continued.

from Mammoth to head of Miller Creek, were barked by elk. Bdgg (y thinks they eat aspen / bark every fall when there is no shortage of food. This is interesting, as bearing on the situation in Rocky Mt. Natl. Park.

Quite a few lodgepoles were barked by porcupine and on the old east boundary where it crosses Miller Creek. No buffalo nor elk were seen in the Miller Creek basin, but buffalo trails & hair were seen, where they come down to water.

No grouse were seen on the whole trip. Not all caught fish in the Lamar below Miller Creek, but most of them were below 6", & the largest were only 8"-9". The river is very low this year.

Returning by the hay pasture, we could see that it was badly burned by sun & drought. Hay will be scarce for the ranch this year.

# Yellowstone Natl Park

July 24, 1931. Trip with C.M.W. into Bechler Station by truck, + by foot to Bechler River about 5 miles east of Bechler Station.

Three tule + lily-pad lakes were seen between 2 + 4 miles east of station. They were about ½ mile long, each. Water is so low this year that the beaver houses are left on mud or dry ground as we have found them all over the Teton + Yellowstone country.

4 Sandhill Cranes, adults, were feeding on the first lake 2½ miles east of the station. They were first seen ½ mile across the lake. When we returned, 3 hrs. later they were on the same side of the lake but were very wary. They were ¼ mile away when we first came through the timber. We watched them for 15 minutes + they watched us. When we moved, they flew away in a flock. Their necks in flight, are straight as with a swan or duck. Their wing spread appeared to be 8 ft. at least, for as large as the Trumpeter Swan.

Swans were reported seen on this lake July 17 but we could not find them; + considered the water too low to float them. 3 female mallard + 2 female Ruddy ducks were seen. The

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# Yellowstone Natl. Park
## Beehler Station Trip July 24, 1931

Ruddy ducks each stayed in a pool about 15 ft. across and would not fly away. We thought, perhaps, it was due to molting.

7 Gray Ruffed Grouse were seen 12 miles west of Beehler. One of them stayed within 20 ft. of the road & strutted & "clucked" at us. Finally, after getting its picture, they all flew away. One of the fire fighters said grouse were very abundant in the Targhee Forest.

Jerry Yetter, the ranger at Beehler says there are many moose in this region — more than in the Thoroughfare.

A bear had been around the truck while we were gone.

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Yellowstone Natl. Park
Sicklef Creek Camp & Fire Area.
July 25 – 29, 1931.

Going along the edge of the fire we saw nothing unusual, except that chipmunks were several times seen out in the grass some distance (100 yds. in some cases) from the nearest trees.

Deer were seen along the edge of the burned area where spot fires were still burning. They seemed unconcerned & fed quietly. Many deer & elk tracks were seen in the fresh ashes of the fire area. No injured or burned game was seen or reported from any locality, except one cow elk on upper Sicklef Creek, who had a front leg completely broken & dangling loosely.

Where the fire had crowned, as it did nearly everywhere, and the forest was only a group of bare, charred poles, crossbills, jays, osprey, ravens, robins, Arctic peewees, juncos, and others were seen & heard flying & calling in a normal fashion.

Chicken Ridge & Mt. Barlow are in the height of the elk summer

Yellowstone Nat'l Park
Sickle Creek & Fire Area
July 25-29, 1931.

range. Mt. Barlow especially, is deeply forested with an abundance of brush and grass beneath the trees. It was not burned; whereas the southern portion of Chicken Ridge was. Bands of about 6 elk were seen out in the Sickle Creek meadow on several evenings. Two beautiful bull elk with splendidly developed antlers in the velvet were seen down at the mouth of Heart River. The entire region is covered with elk trails. I saw no bear nor bear sign, except a few tree scratches in this region. One bear with a lame fore foot was reported seen up near Heart Lake in the fire area.

George Baggley, chief ranger, reported a pair of Swans on Heart Lake, July 28, and he thought they had young.

No carcasses nor skeletons were seen in the burned forest.

Yellowstone Natl. Park
Jern Lake Trip with G.M.N.
July 31, 1931.

We rode horses to Jern Lake via Pelican Creek. The day was threatening and rainy.

Canada Geese were seen in many flocks, ranging from 4 to 65. An attempt was made to count them, but they flocked back & forth so much that no count could be obtained. No young were seen. The geese were always found standing in the tall marsh grass along the valley floor.

Many ducks with young were seen on the creek. Mallard, Barrow, Goldeneye, and scaup were identified.

A pair of Trumpeter Swans was found on Jern Lake with a family of 6 cygnets. The swans, upon seeing us, left the lake and walked across a slough ¼ mile to an adjacent lake, just as they do at Trumpeter Lake. Jern Lake is an ideal swan nesting lake; shallow rimmed with tules & rushes, and about ½ by ¼ mile in length & breadth.

About 200 ducks were swimming on the lake but were too far away to identify.

A pair of Sandhill Cranes

Yellowstone Natl Park
Jenn Lake with G.M.P.
July 31, 1931

with one young were near the margin of the Lake. The young one could not quite fly, but it could run very fast, and hide effectively in the grass. The old birds would not fly far away as is their usual custom. One of them flew ¼ mile away. The other played the lame wing ruse within 100 yards of us, & kept running and calling.

6 elk, all bulls, were seen down in Pelican Creek Valley about 6:00 P.M. Elk trails were abundant everywhere.

The remnant of the original wild herd of buffalo is supposed to be along Pelican Creek. We saw buffalo chips at least a year old, and some which might be of this spring. But the range is so close to the summer range of the main herd that we do not feel any certainty about a separable herd on Pelican.

Ranger Allen Hanks reported 2 coyotes on Pelican Creek ~~[illegible]~~ slightly southeast of the mouth of Heliotrope Creek in the morning just before we arrived.

Thompson

Yellowstone Natl. Park

From Lake to ~~McGinnis~~ Old Faithful & thence to Shoshone Lake. August 1, 1931

Two Sandhill Cranes were seen in the meadow 2 miles west of Norris. They acted as though they might have young hidden in the timber.

At the west end of Shoshone Lake we saw 2 pairs of Trumpeter Swans. One pair had 3 cygnets. This end of the Lake is marshy. One deer was seen and many elk tracks.

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McGinnis Valley View Ranch

August 2, 1931.

Mrs. Sherwood's museum near Henrys Lake.

Mrs. Sherwood had two adult Trumpeter Swan specimens, obtained about 35 years ago from Henrys Lake, and 4 eggs, and 2 cygnets. She also had a Sandhill Crane & young, 2 wolverine obtained just west of the park, cougar, cross fox, and a black wolf. These are the only ones of particular note.

She reports seeing a pair of Trumpeters on Henrys Lake each summer.

Yosemite Valley Nov. 27, 1931

A Barn Owl was seen on the roadway just inside the Ahwahnee Garden at 9:30 P.M. Charlie Michael said he had never seen nor heard of one in the valley. It sat in the road in the headlights for a few seconds after we stopped, & then flew into the dark.

Thompson



Yosemite N.P. Nov. 28 1931

Interview with Colonel Thompson, Superintendent

Tule Elk: There is the possibility of placing the elk in Eleven Mile Meadow. The Colonel thinks there is enough forage there to take care of them, with possibly some hay feeding in severe winters. But after discussing the Elk Reserve proposed west of Bakersfield, the Colonel thought it would be better to take them out of Yosemite entirely & place them in the Reserve. He proposed this program:

1. Y.N.P. write the Director suggesting this move, & explaining the idea of a northern & southern San Joaquin division of the herd. This would insure greater safety for the remaining herds.
   c.f. Storer's letter on the elk.
2. Colonel Thompson will see others concerned & get their consent. He will try to raise enough money to pay for shipping the elk to the Reserve, & to help with the initial fencing.
3. In the meantime, we will all try to interview the proper parties to develop the idea of moving the Tule Elk from Yosemite to a suitable reserve in the San Joaquin.

Thompson

Yosemite N.P. Nov. 28 1931.

Interview with Colonel Thompson, Supt.

Bears: The Colonel is discouraged about the dog experiment because:

a. Rangers don't handle dogs properly.

b. People tend to make pets of the dogs & think of them as their own.

c. Of the difficulty of procuring the proper dogs. Wire-haired terriers are not good bear dogs. German Police & Boxers are the best.

The experiment has been somewhat successful, in that it has been possible to form a "dead-line" across the valley above which the bears are dogged, treed, trapped, & shot in the rump with fine shot, and below which they are fed & made welcome. Feeding shall take place at the bear feeding ground mid-morning, afternoon, & evening. This has not hurt the evening show, so far. The Colonel thinks there are too many bears in the valley. They have had to kill a few vicious ones. Jorge Wright expressed some disapproval of shooting bears with fine shot because of the carelessness of rangers with a gun. We thought it would be better to kill outright than to run the risk of wounding & infection. The Colonel agreed to investigate the matter more closely. He has hopes that the new cub crops raised in

ompson

Yosemite Valley N.P. Nov. 28, 1931

Interview with Colonel Thompson, Supt.
the lower portion of the valley, will be better
trained to keep away from the camps.
With good dogs, properly spotted &
handled, he thinks the bear problem
is 30% solved. Some of the bears that have
been trapped & taken out of the valley did
not return. Others have returned. The
trapping will continue, & weights & ages
are recorded. Warnings against bear
feeding have been posted all over the
valley. The situation is much better
than in the past, although not solved yet.

Coyotes: There has been much agitation
against the park as a breeding den of
coyotes & other predators, in the Mariposa
& Merced papers. Coyotes have greatly
increased in the valley in the last 2 years.
Therefore, the Colonel had 5 coyotes shot
on the floor of the valley, & intends to
"play up" this control. The sentiment
outside the park is adverse to any
new park additions on this predatory
animal basis. The order to stop killing
coyotes was issued today. Shortly after
it was issued, Gus Eastman told the
that tourists had just reported seeing
3 coyotes killing a fawn in the lower
portion of the valley. The region, however,
is overstocked with deer.

Bobcats; the Colonel reported that several had been seen lately along the north talus slopes, & on the valley floor lately.

Thompson



Yosemite N.P. Nov. 28, 1931

Interview with Colonel Thompson, Supt.

Deer: 37 deer were deported from the valley this season, & placed in the Hetch Hetchy region. This makes a total of 137 deer deported from the valley & transplanted in the Hetch Hetchy region in 4 years. The Colonel says that forage conditions on the floor of the valley are already showing some improvement. Mrs. Enid Michael says that the deer are just as plentiful as ever. At the beginning of the first snow storm this winter, about Nov. 15, the deer migrated in a "parade" down toward & through the O'Connor Post Reserve. The Colonel reported 37 deer shot & killed from the front porch of O'Connors home. We saw 23 deer as we came up the valley last night. Two were bucks with good antlers, both 3 pointers. Several fawns were in the various groups, & the snow was past up to their bellies. They would be easy prey for coyotes. But we can see no reason to protect deer against a normal number of coyotes in the park so long as deer are below the normal numbers, which they certainly seem to be.

Gray Squirrels: The Colonel says that the gray squirrels have showed a marked increase this last year & are quite commonly seen. He says also that the company's control of ground squirrels continues.

Yosemite Valley N.P. Nov. 28 1931

Interview with Colonel Thompson Supt.

Fire Fighting: The first fire of importance since the Colonel arrived, occurred in the Hawona district this last summer. From his experience in this fire, he says that there will be no separate fire organization in the future. But rather, the entire administrative organization of the valley will be transferred immediately to the fire, & each person trained in his department will function at the fire just as he does in regular park routine. This seems very desirable to us.

Nov. 28, 1931.

George Wright & I hiked from 8:00AM till 11:00AM, going over the Yosemite Falls trail to the Lodge, down below the Lodge to the Merced River, & up the River to the Rangers Club. We saw 9 deer, including a Black Tail doe which George photographed, and 2 bucks. All but the bucks were on the sunny talus slopes along the Yosemite Falls trail. Two does were bedded down under a Libocedrus at 8:30AM, on a patch of bare ground in the sun. Deer tracks were numerous there. The manzanita had a "deer line." The 2 bucks were seen along the river. No other signs of animal life were seen along the river. I

Yosemite N.P. Nov. 28, 1931.

Trip around Yos. Falls trail & River. On the north side of the valley, we saw a flock of Golden Crowned Kinglets, foraging in the snow & in the trees. Their characteristic wing flip seemed ill adapted to the ground but natural in the trees. We could not see what they ate. Others seen were: Titmouse 2, Robin 1, Towhee (Spotted) 1, Stellar Jays many, Bush Tits, many, Willow Woodpecker 1, Calif. Woodpeckers several, Canyon Wren 1, A Pileated Woodpecker was seen on the south side of the valley by the Four-mile Trail yesterday.

The Tule Elk bugled this morning. Chickarees & Stellar Jays are very abundant this winter.

Nov. 29, 1931

Near the Rangers' Club this morning a buck & 3 does were seen. The buck sniffed of the ground & then stretched his head & neck horizontally, with nose wrinkled as they are seen to do during the rut. This may perhaps be a sign of rut instinct still evident. The Tule Elk have bugled all morning.

Snow is melting in the sun very rapidly, but it is still a foot deep on the level ~~on~~ the south side of the valley.

# B. H. Thompson
## 1929-1957

## Journal

1932 Calif: Yosemite N. P.
Nevada: Pyramid, Winnemucca, Washoe Lakes
Utah: Salt Lake
Wyoming: Yellowstone N.P.
Oregon: Malheur, Warner, Goose, Klamath Lakes
Calif: Eagle Lake
Idaho: Selway and Clearwater National Forests
Minidoka Reservation
British Columbia – white pelicans

Reference Yosemite N.P.

March 18, 1932.

Mr. Gardiskei who has a store on the Tioga Road by head of Tenaya Canyon was just in the office.

Mt. Sheep (Ovis canadensis sierrae).

Mr. Gardiskei has seen no sign of them in that region. We asked him to watch for them when we were at Saddle Bag Lake in July 1929.

He has seen no sign of wolverine either although we found a wolverine track at Saddle Bag Lake in 1929.

He still traps martin in the vicinity of his store, but he says their pelts are badly infested with ticks & lice. He says that martin come up to his store in winter. They were on his roof this last winter.

Badgers are quite common. He says they seem to come out just before a storm & dig many holes. If they find a rodent in the hole they hunt they stay there until after the storm.

Coyotes do not stay up in the mts. during winter.

The recent fish plants have been very successful in the Saddle Bag Lake region. Various trout have been planted, but I did not find out what kinds.

Thompson Yosemite March 21, 1932

Interview with Mr. Gandolski
Has been there at least 9 yrs. Trapped about 2 yrs. before that.
Martin declining. Second season got 42 martin pelts, after that dropped about 10 each year. Last season got 11. Same moved in this last season. Martins move along rts. in search of food — may go 40—45 miles in 24 hrs.
Wolverine. Caught 1 in 1925?
Patterson, engineer for Berkeley caught 1 in 1910. Mr. Gandolski seen one cross road between Saddle Bag Lake & Highway in 1929, summer.
Coyotes may stay in a canyon all winter if there is sun. Not so many coyotes along crest as there were a few yrs. ago. Will eat juniper berries in winter. Earlier in season, will eat pinon nuts, and manzanita berries.
A tame goat lived on hillside above Ellery Lake all winter and no predators got it. Later it disappeared — thinks coyotes got it.
Rangers shot coyotes this last summer.
Fox (Cross, Reds, & 1 Black Silver) were seen. One season, got 13 (2 were spoiled) that was in about 1920—21.

Thompson Yosemite March 21, 1932

Foxes holding their own. Quite a number of Silvers were taken years ago. Two parties years ago got about 7 in all. In 1929-30, Mr. Gandiskei got 5 foxes near camps.

Weasel, lots of them well scattered. Good white pelts, as good as from any section.

Badgers about holding their own. Mr. G. thinks they would eat any kind of meat, or bird eggs.

Fisher Mr. G. got 6 altogether near Devils Post Pile region from about 1915-18. One was the biggest he had ever seen. They would get up about 8500' in winter. They live on Mt. Beaver. Mt. Beaver still present. But mild sanguis is poisonous to them where it is present.

Porcupines used to be plentiful.

Lynx (cat) caught 5 in Tenaya a year ago.

Cougar, about 7 yrs. ago 3 of them were in the Slate Creek region. None heard of since, not even in the Mono Basin.

Deer, Coyotes, & Lynx all fair out

before a heavy storm. Sometimes deer get caught in the Bridgeport country.
Bear, rather plentiful in this country & around Buckeye Canyon 11 bear were taken in Bridgeport country about 8 yrs. ago.
Nevada trappers have come in within the last 5 years & trapped coyotes in Bodie, Fletcher & Mono. Some seasons they claimed 200 coyotes were caught.
Beaver (otter) was in Mr. G.'s cabin this last year.
Grouse very scarce. One seen on road between Ellery & Lake & Warren Creek last year. Mr. Gandolfi saw a weasel get a grouse & eat it in the spring. He also saw a weasel kill a Great Blue Heron over by Lee Vaft Pile. They will also kill jackrabbits.
Great Horned Owls will get grouse, probably worst enemy of all.
Mr. G. thinks the eagles are the worst enemies of the Mt. Sheep.
Quail (Mt. Quail) are few in Leevining Canyon - Mr. G. thinks

Thompson Yosemite March 21, 1932

the Lynx are their worst enemy.
Pinon Jays this last winter were very abundant around the camp. Perhaps 1000 of them. Stayed in flocks. Not seen before.
Mr. Gandiski saw a large hawk (Cooper Hawk?) ~~get~~ chasing a King Fisher one evening. The hawk seemed to be gaining on the King Fisher, but they finally flew out of sight.
Water Ouzel abundant in high mountains. Years ago there weren't any.
About 10 years ago over in the Sawtooth range Mr. G. saw a Lynx! which did not run when the Airdale dog took after it. It showed no fear of dog. But growled quite a lot.
Ducks on Mono Lake disappearing fast. Used to be on Mono Lake for 2 weeks in Fall by the thousands. Mostly Spoonbill, some Mallard.
Roadrunner seen by Mono Lake about 2 yrs. ago.
Lots of Snipe & Hellidivers on Mono Lake latter part of Sept.

Pyramid Lake, Nev. May 7, 1932

Trip with Fran S. Chamberlain

Nests counted on Anaho Island

| | | |
|---|---|---|
| North colony, nests with 1 egg | | 48 |
| Central colony, nests with eggs | | 297 |
| " " with young (1 egg/young) | | 12 |
| " " 2 young | | 50 |
| South colony nests (1 & 2 eggs) | | 260 |
| total nests | | 667 |

As near as we could count there were 1200 adult pelicans seen at the island between 2:00 P.M. and 6:00 P.M. Most of the birds had the boobies on their hills. Those with young did not fly until we were within 50 feet.

The colonies were found near the north end of the island up about the last waterline (ie. of about 40 yrs ago); 2 on the center of the island just before reaching the steep rocky part; 3 on the south east corner of the island about on level with said water line. Perhaps one third of the eggs seen were broken. In the central colony the young were all hatching together. No young looked more than 2 days old (guess). Several eggs were being pipped. Several nests had 1 egg & 1 young. The southern colony had many nests of 2 eggs. The northern colony had 1 egg to a nest, none with two.

Domestic goats were put on the island a number of years ago, but the project failed.

Simpson

Pyramid Lake, Nev. May 9, 1932

The island is quite green with filaree, some kind of salt bush, some grasses, larkspur, fiddlenecks, & various unidentified herbs.

Pelican remains (adult & young) were found scattered almost everywhere on the island — many were adults of this year.

19 Canada geese were seen on the island. They flew into the lake honking loudly.

1 Western Grebe was found dead.

→ 1 skull of ~~goat~~ ~~antelope~~ deer north end.

11 buzzards were seen soaring around the peaks.

A Redtail? was heard calling.

Linets were singing all over the island.

Many blackbirds (not redwings) were seen.

Several small, dark ducks with crests were surface-feeding in the little bays. They were not seen to dive, & I could not identify them.

2 Rattlesnakes were seen.

Many lizards (unidentified).

Millions of flies & gnats.

Several Calif. Gulls were seen, but not many.

Perhaps 10 cormorants.

mp507

Pyramid Lake, Nev. May 9, 1932

The lake was very placid all day; only slight breezes rippled the lake. The day was only pleasantly warm. Considerable snow can still be seen on the mountains close to Pyramid Lake. The Sierras are still densely covered with snow from about 6000 feet up. We passed several places where it was over 3 ft. deep on the level (crossing Donner Pass May 8.)

Mr. Cooper, custodian of the refuge, said there were only ~~about~~ 7 colonies of pelicans last year. He thought 7000 was a generous estimate. (Note: Hall counted 10,000 in 1924). We think we are too early to get all nests this trip.

Indians fish in the lake constantly & report the fishing good. ~~The~~

Mr. Dana has a ranch house just backs of Coopers. He says that the immediate 20 acres on which all buildings are located is the only available private land — rest is in Indian Reservation. There is also a small resort here. It is run by 2 young fellows, and is not strictly Presbyterian. Anaho Island is a good preserve.

Winnemucca Lake May 19, 1932.

Cooper, of Pyramid Lake, says there are no islands in Winnemucca Lake nor pelican breeding grounds.

We drove by Nixon, Piute Indian Agency, to the southern end of Winnemucca. The lake had receded at least 2 miles from its former shore line, due to diversion of the Truckee River water. No water was running in this branch of the Truckee when we were there. The land made available by recession of the lake is now fenced and has a few head of cattle. It appears to be very poor range. The lake has a picturesque setting but is exceedingly desolate. I can see nothing of National Monument caliber in it, although there may be distinct species of fish there which are found nowhere else. We did not drive the 30 miles to the north end of the lake because there appeared to be nothing to justify the trip.

At the lower end of Pyramid Lake we saw 1000 pelicans (counting & estimating) feeding & resting in & near the mouth of the Truckee River. This was about the same time the count at Anaho Island was made the previous day. We have probably seen 2500 white pelicans at Pyramid Lake all told.

Washoe Lake, Nevada May 10, 1932.

Washoe lake was visited in the afternoon. An old road follows its eastern shore and the next road follows the western. The lake is very shallow and was very muddy (chocolate color) caused (I suppose) by the waves which were muddying its surface. It has no islands. Last year it was practically dry. It is surrounded on north & east by several square miles of what appears to be recently drained marsh land. This marsh land is full of hummocks which may have provided breeding grounds for waterfowl in years past. An artificial dike runs north from Washoe to Little Washoe Lake, perhaps 2 miles. A high dike circles the lake on north & east. It looks too large to be an artificial dike, yet its location would seem to indicate that it is. This latter dike follows the water's edge and shuts the water out of the dry marsh land. If it is a natural dyke water may have surrounded it in past years to have made white pelican breeding grounds. We saw 3 pelicans on the lake. A workman in the vicinity said he used to get ducks & geese on the lake, but none came any more. Only catfish are in the lake.

Bird Island, Salt Lake, Utah

May 15, 1932

Today was ~~a~~ delightfully clear, with rolling waves on the lake, and a light breeze. We left camp 10, about 2 miles west of Saline, at 11:15 and arrived at the island in about 1½ hours — about 9 miles distance.

Pelicans (adult), we counted and estimated about ~~3500~~ 4000. Mr. David N. Madsen of Salt Lake, for 10 years ~~State~~ State fish & game Commissioner, estimates that there are never more than about ½ of the adults at the island during the day. The rest are out fishing in Utah Lake, Bear Lake, and various other places. This would make the Bird Island colony about ~~7000~~ 8000 adult white pelicans. Mr Madsen also says that about 60% of the Bird Island colony has always nested on Gunnison Island, some 20 miles northwest of Bird Island. We did not get to visit Gunnison, but if the same is true this year, there may be around 10,000 pelicans on Salt Lake.

The nests on Bird Island ranged from new nests without eggs, nests with 1 egg, nests with 2 eggs, nests with young just hatched, nests with 1 young just hatched and 1 young covered with down

Madsen has seen a few trout on the island.

Fran Chamberlain says 3 nests with young gulls just hatched.

Bird Island, Salt Lake, Utah

about the size of a large Plymouth Rock hen, to pools of these fat young able to waddle away from the nests. We counted 1488 occupied pelican nests (ie. with either eggs or young or both). The nesting has evidently not yet reached its peak (as for numbers).

A few small piles of small fish were strewn about — no trout seen among them; mostly "shiners" & other non-commercial fish.

Madsen says the pelicans fly about 75 miles each day to feed. They go south to Utah Lake at evening, and return in late morning the next day.

California Gulls were nesting over the entire 9 acres of the island. We estimated between 15,000 — 20000 gulls present. 4 nests were found to each 4 square yards, (which seemed about right) there were near 10,000 nests on the island. Eggs ranged between 3 and 2 per nest, with a few clutches of 4, and many nests with 1 egg. I saw 1 gull just hatched. We did not see many pelican eggs which looked as though gulls had broken them. Curiously, the gulls nests were interspersed throughout

Bird Island, Salt Lake, Utah

the pelican colonies. The gulls made a continual cry at our intrusion. Several swooped at our heads and screeched just as they passed, but none struck me. Mr. Madsen said that a few years ago, when his boy was on the island with him the gulls swooped & struck the boy on the head making his head bleed.

30 Great Blue Herons were seen

I saw 1 nest with 2 young herons which appeared to be about 1 week old.

1 American Merganser, female, was seen.

(Note: Mr. Madsen estimates 8000 pelicans on Bird Island). He had never seen so many pelicans and gulls on the island before.

We passed about 100 grebes (Eared grebes?) enroute to the island.

There was much variation in the size of pelican eggs. I found one nest with 2 eggs about the size of bantam eggs but slightly longer — same white like the pelican eggs. They looked abnormal. Possibly pelican eggs from an abnormal female. The shells were very rough.

Yellowstone May 19, 1932

This afternoon George & I hiked over the brow of the hill behind the administration area down to the Gardner River at the first bridge, and back up the road.

Overgrazing is very prominent. Every juniper and pinon has a "high-water" line about 7 ft. above ground. Hardly a twig remains below the line. Sage brush is browsed until it is stubby, and many bushes are killed. Grass is cropped to the very ground. The Giant Rye grass is quite prevalent. Even it has been taken somewhat. Aspens are severely barked above the pronounced high water line, and have no reproduction. The hills look bare, and are covered with game trails. Chrysothamnus & choke-cherry & snowberry have been heavily browsed — only a few stubs remaining in many clumps. Erosion is setting in. Sparkesperm is showing in scattered places.

If there are 10,000 elk in this northern herd, it is my opinion that they should be reduced to 5,000. The range looks as bad as the Kaibab, to me. Unless the elk are immediately

Yellowstone May 19, 1932

reduced the range will continue to deteriorate. George suggests that the elk be reduced 1000 per year by hunting, until the carrying capacity of the range is reached, and range recovery is apparent.

A white-tailed jackrabbit was seen in the sage brush. One ear (left) was slit to the base. The rabbit ate grass within ~~ten~~ 30 ft. of us, then very slowly stretched, first putting its fore legs out, straddling the thorax next, and lastly the hind legs far out in back as it stretched with its belly close to the ground. Then it began to creep away like a cat, legs stretched out in back, moving very slowly by jerks (as in a comedy) but with all four legs working separately. We took movies of the process. It was very amusing. I think the rabbit loped away.

Two elk were seen about ½ mile back of the administration bldg.

Four antelope were seen feeding on the table slope across the Gardner River.

Birds identified: Clarks Crows, Crows, Magpies, Mt. Bluebird Robin, Vesper Sparrow, Chipping Sparrow, Osprey, Red-tail,

No bears were seen but 1 bear track was seen by the Dragons Mouth.

Yellowstone May 20, 1932

The trip today was from Mammoth to Turbid Lake via Canyon and Lake.
4 moose were seen in Beaver Meadows, 2 bulls and 2 cows. They were there when we returned at 6:00 P.M. They were feeding when seen both times. One cow moose was seen in the Gibbon meadow at Norris. She ate quite awhile, without appearing to be afraid of us, then ran across the road & disappeared in the forest. At evening when we returned the cow was back again. She was so tame that after we had photographed her she would not move even when we threw rocks at her. Finally when we routed her she was forced to swim the river twice. She seemed reluctant to get into deep water. At last she got away, after appearing to contemplate swimming upstream under the bridge, but changed her course, & ran across the road.

4 elk ran through the edge of the forest about 100 yards from the moose as we were photographing the moose. 14 elk were seen feeding along the Yellowstone River about 2 miles before the lake, about 5:00 P.M. One other cow elk was seen later. These were all the elk we saw all day.

The pelicans have been here for at least a weeks.

Two were seen with fish.

Yellowstone May 20, 1932

5 deer were seen on the Parade Ground as we came into Mammoth. The deer are still in shaggy coat, although their coats are beginning to look a bit ragged & they seem to have many ticks. These deer have a black tipped tail which is entirely white ~~board~~ toward the dorsal base.

4 muskrats were seen along the Yellowstone River (one of them in Pelican Creek). All were swimming on the surface.

Many marmots in dark red pelage were seen everywhere.

Census of water birds, taken enroute to Jurbid Lake, but not on the return, disclosed the following:

| | male | female |
|---|---|---|
| Mallard | ~~6~~ 17 | 14 |
| Canada Goose | total of 35 | |
| Coot | " " 2 | |
| Barrow's golden-eye | 10 | 11 |
| Bufflehead | 6 | 5 |
| Merganser | 5 | 6 |
| Green-wing Teal | total of 4 | |
| Eared Grebe | " " 7 | (mating plumage) |
| → Pelicans (white) | " " 4 | (Yellowstone Lake) |
| Calif. Gulls | " " 16 | |
| → Osprey | occupied ~~tenpeste~~ nest in Yellowstone Canyon. | |
| Spotted Sandpiper | total of 5 | |
| Killdeer | " " 6 | |
| Great Blue Heron | 1 | |
| Sandhill Crane | 1 at Jones Flats high & called for about 10 minutes. Disappeared. | |

Yellowstone May 20 1932

Ravens, about 10. One pair had a nest in Yellowstone River up near the rim in a cave on the southeast side.

The day was light cloudy, with snow patches everywhere. Snow is still about 1 foot deep in the forest. One drift in a road cut in Hayden Valley was 10 ft. deep. Yellowstone Lake was still frozen over. Ravens, gulls, & pelicans all ~~[illegible]~~ on the ice.

Birds seen for the first time in the park this spring were:

Audubon Warbler
Thrush (  )
Barn swallows

Many others were seen:

Violet-green swallows
Robins
Meadow Larks
Mt. Chickadee (1 excavating woodpecker hole for nest.
Red-tail Hawks (abundant)
Redwing Blackbird
Flicker (Red-shafted)
Junco
Vesper Sparrow
Sutaimon ~~[redacted]~~ Hawk
Crow
Mt. Bluebird
Clarks Crow
Rocky Mt. Jay

Yellowstone. May 27, 1932.

This morning a trip was made to Stephenson construction camp about 3 miles out of Mammoth on the Norris road.

Mrs. Stephenson says that she has warned the men not to feed bears. She seems to be aware of the inevitable consequences of such practices. Last night a blackie bear came into camp and up to one of the bunk doors. The dog in camp drove the bear away. She reports about 3 or 4 bear visits this spring. No damage has been done yet.

The garbage is thrown in an open pit about 100 yards from camp, behind a big rock. I could find no blackie nor evidence of a bear visit to the garbage pit.

Mammoth to Lamar River Bridge
Jr Census



Yellowstone May 26, 1932

The day is cold, windy, & gray with intermittent snow storms. Trip time was from 8:30 to 4:00.

The census was as follows:

Mammals (seen from the road only)

Elk 121 in bands of 12, 6, 5, 4, 5, 3, 34, 41, and a scattering of singles.
Antelope 14 in bands of 3, 1, 3, 1, 2, and 4.
Deer, 6
Snowshoe Rabbit 1
Marmot 5
Ground squirrel 5
Badger 1

Birds (seen from the road only)

Rocky Mt. Nuthatch 1
Linnets 3
Robins 6
Mt. Bluebirds 10 ♂, 4 ♀
Audubon Warblers 10 (upon returning we saw about 100)
Brewer Blackbird 8 ♂, 6 ♀
Flicker 1
Eng. Sparrows 5
Chipping Sparrows 17
Magpie 1
Redwing Blackbird 4 ♂, 1 ♀
Redtail Hawk 3
Coot 1
Barrows Goldeneye 2 ♂, 2 ♀
Raven 1
Meadow-lark 4

Census

Yellowstone May 26, 1932

Sparrow Hawk 1 ♂
Vesper Sparrow 2
Junco 2 ♂, 1 ♀
Townsend Solitaire 1
Green-winged Teal 1 ♂, 3 ♀
Traill's Flycatcher 1
Rocky Mt. Jay 2
White-crowned Sparrow 1 ♂
Killdeer 3
Mallard ♯ 3 ♂, 2 ♀
Trumpeter Swans 2
Ravens 3

The badger was watched from 11:45 to 12:30. It was first seen near the Lamar River Bridge hunting in the grass near the river banks. It was digging here and there in the grass. When it saw us it came toward us until within 100 ft. of the car. Then after much dissembling it scurried up the road for about ¼ mile, then ran off the road about 150 yards into the sage brush. From time to time while scurrying, or galloping it held its tail erect as a skunk will do. At that laid down by its burrow & appeared to sleep. A small bird jumped up on the dirt near the burrow and the two watched intently for each other

Yellowstone May 26, 1932

about 2 minutes. We were under the impression that the badger was waiting its opportunity to seize the bird but the latter flew away. The badger. The badger laid by its den 35 minutes (raising its head at intervals to look around) then went down its hole. We approached the hole & looked in. But then the badger peered out at us for a moment & then disappeared. We sat down to wait a few minutes. When we next looked, the burrow was plugged.

It is well to note here that Mrs. Ben Arnold, Ranger Naturalist, tells of a badger entering a chicken coop here at Mammoth several years ago and killing & bringing 15 chickens. The following night the badger returned to the coop & was caught & killed. This perhaps throws some light on the question of the disappearance of the cygnets of Trumpeter Lake — ) at least another suspect is added.

Arnolds have been feeding barley to dove for several weeks.

upson

Yellowstone May 27, 1932

A light, clinging snow fell last night, & at intervals all day yesterday. This morning it is falling rapidly off the trees & melting. The day is cold & windy. Isles around the lake are still dead & yellow. The census cannot be complete because nests are not yet made, except in a few instances. But birds seen on the lake are herewith listed.

Trumpeter Swan Total 2

Barrows Goldeneye 4, 2,

~~Violet Green~~ Cliff Swallows & Tree Swallows est. several hundred

Yellow Headed Blackbirds many

Coots est. about 50

Wilson Phalarope, 6, 2,

Scaup 2 1♀ 2♂

Eared Grebes ~~est.~~ 43 ~~20~~

Ruddy Duck 4, 1 4♀ 5♂

Mallard 1, 1, 1, 1, 4

Redwing Blackbird est. 20

Audubon Warblers 1, 4, 4, 10 est 100

Brewer Blackbird est. 20

Killdeer 2

Pintails 6, 2, 8

Vesper Sparrow est. 10

Yellow Throat 1♂ 1

Canada Geese 2

Bobolinks 5, 2 est 10

Savannah Sparrow est. 100 ~~50~~

Mourning dove 1

In walking around the lake, we have seen,

One elk cow was seen eating Giant P
Grass by the roadside. Next she ate so
sage brush which was still covered w
fresh snow.

Yellowstone May 23, 1932

no nests, except the Swan nest. Several coots acted as though they had nests. The day is turning windy, gray, & cold.

As we came out from Mammoth this morning we saw a large black bear just east of the Gardner Bridge. It was in splendid condition and fine winter coat. It was very wild and loped up the road perhaps ½ mile before it plunged down a steep embankment and stood down in the trees looking at us. Such action is in marked contrast to the "hold-up" habits of the summer bear.

About 100 elk were feeding in small herds, scattered along the road all the way to Roosevelt Station. Several elk had antlers with 3 branches and one had the 4th beginning. Marmots & ground squirrels were in evidence everywhere early in the morning. About 20 deer were seen feeding along the road.

One mourning dove was seen near Roosevelt Station.

As we came back 1:00 PM very little game was in evidence, except numerous flocks of Audubon Warblers. A pair of Thrashers by the stone frog. Their song was very Thrasher-like, but not so heavy

Yellowstone May 27, 1932

as that of the Calif. Thrasher. Once when the two were on a rock, each raised its wings slightly over his back & bowed to the other, then stretched its head high. This bow was performed by both birds about 3 times in succession, then not seen again.

The Trumpeter Swans were at their nest when we arrived (about 7:00 A.M.) One bird was sitting with head tucked under wing. The other was feeding nearby. As soon as we started down toward the lake both birds left the nest & hid in the tules. When we left the lake about 12:30, one swan was back on the nest.

Wright saw a male Tanager at Yellowstone Bridge. The Arnolds reported seeing one a week ago. This is the first record we have this year.

Babe La Nore (Nayoga) reported finding a new born elk calf near Slough Creek, in sage flat by the mail box on Cooke City Road, May 25, 1932.

Beaver Lakes West of Mammoth 3 miles.



Yellowstone

1932.
May 28,

A party of 8 of us went fishing at the lake this afternoon but only 1 fish was caught. This was a rainbow trout. One other rainbow was caught during the afternoon by a man not in our party. About 15 people were fishing all afternoon, but it was reported that fishing had been good in the early morning. The day was rainy & windy.

George & I returned between 6:00 PM & 7:00 PM, hiking across the hill to Clematis Gulch. The first pond east of the lake had 3 beavers swimming in it. We watched them for about ½ hour, but they did not get out of the water. They have cut considerable aspen in the vicinity, but still have a good supply of willow & aspen left.

Up on the hill behind the administration building, near the old horse corral, we flushed a cow elk from a small thicket of aspen. She disappeared immediately. But her calf, the first we have seen this season, was hidden in the thicket. It looked about 2 days old. It was frightened, but did not move even when we touched it.

near Yellowstone May 28, 1932.
In the sage brush on the hill we heard, rock wrens
audubon warblers
ruby crowned kinglets
Mt. chickadees
vesper sparrows
bobolinks
clarks crows
ravens
robins
sparrow hawks

In Clematus Gulch we saw a Catbird, the first line seen.

There were heavy signs of winter grazing all the way. Even in Clematus Gulch, the "high water" mark was pronounced. One bear tracks was seen in the Gulch.

Thompson

# Firehole River

228

## Yellowstone

May 29, 1932.

Trip, today, was from Mammoth to Firehole River by the Buffalo Skull pool. We left about 10:00 A.M., consequently no elk, ~~deer~~, nor moose were seen en route to the Firehole. But as we returned late at dusk we saw 4 moose; 1 along the Gibbon just a few miles east of Madison Junction, 2 in Elk Park near Norris, and 1 in Willow Park near Obsidian Cliff. Since, at other times we have seen 9 moose all together in Willow Park, these other 3 seen along the Gibbon are probably different animals. If it had not been so late, we might have seen more in Willow Park. But a tentative estimate of at least 12 moose is here made of the population along the route traversed.

Bands of elk were seen in all the meadows from Buffalo Pool to Mammoth, seen from 5:00 PM to 10:00 PM, which indicates that the elk are fairly well scattered now.

Two deer, does, were seen in the sage flats between Swan Lake & Obsidian Cliff. They were very wild, in fine condition, & disappeared across the Obsidian Creek, trotting beautifully. They were so much more attractive

mps on

Yellowstone May 27, 1932

than the tame deer which congregate around Mammoth.

No bears nor bear tracks were seen the entire day.

We caught 6 trout, between 8 and 10 inches long in the Firehole; 3 were Lock Leven, 2 Eastern Brook, 1 Rainbow, all in good condition. Many people were fishing all along the Firehole, but, so far as we could ascertain, fish were ~~not~~ caught with spinners, or wet flies. The waters surface was swarming with May flies but no fish were jumping. Consequently our dry flies were not taken.

As we returned past Bunsen Peak & through the Hoodoos, we watched an aurora borealis. It was not very bright but was exceedingly beautiful & fantastic. At its brightest, it cast a weird luminous glow along the side of Bunsen Peak.

Yellowstone May 30, 1932.

David H. Madsen Supervisor, Wild Life Resources, U.S.N.P.S. discussed his plan for utilization of the northern elk herd, day before yesterday, (I failed to get it down at the time).

His attack on the problem is this:

The Park Service cannot solve its elk problem from the inside; it must go outside the park & get the cooperation of the adjacent states. With the present setup, four thousand hunters (Madsen) (at last many) line up along the northern park boundary and shoot the elk as they come across. This, plus civilization, fences, bldgs., roads, etc. drive the elk back into the park & cause the heavy concentration of elk on the park fall & spring range, causing it to be utilized all winter, with the consequent overgrazing. Knight says that about 500 elk starved to death this winter. There is little available winter range outside the park where the elk would normally go, and local sentiment is against its acquisition.

Madsen proposes to get the

Madsen's Elk Plan

compose

Yellowstone May 30, 1931

Montana Fish & Game Commission to use the permit system; i.e. sell so many elk permits per season at $10.00 per permit. Have these allocated a certain number per district; Check the hunters in & out of these districts and allow as much time as is wanted (even to Christmas if necessary) to the hunting season. regulate the hunting by sex, so that the old bulls will be eliminated, the young bulls never taken, and the most productive ratio of cows & bulls maintained. The proceeds from the permits could be divided. Madsen thinks that with suitable winter range, about 2000 to 2500 elk could be removed from the ~~—~~ northern herd each year. At 2000 this would mean $20,000. from permits each season. This should be divided equally between the Park Service & the state of Montana. The Park Service would match its $10,000. by private funds & use it to purchase winter range. The winter range could be administered by the Forest Service for hunting; Montana would make money; sportsmen would,

Yellowstone May 30, 1932.

have more elk; and the park would have its elk only in the proper season & under proper conditions. Glenn Smith & Bill Rush are in accord with this plan & are working toward it. It is hoped that the new Montana Game Commission will be sold on the idea.

Under this plan, Madsen thinks the northern herd could be built up to 15000.

It is our opinion that this is the only solution. However under the present overgrazed winter range condition, we are very much opposed to even maintaining the herd at its present numbers until ~~the~~ suitable winter range is procured. Madsen agrees with this.

It is worth noting here that while this plan will forever keep the elk from being "natural" in the park, such an ideal condition cannot be attained under present conditions. And this proposed plan would be preferable to the present which causes elk to starve to death each season, range to be overgrazed, & opposition to the park from local sportsmen.

# Specimen Ridge Range



Yellowstone June 2, 1932.

For. May 31, June 1 see notes of J.M.T.

Today we left Roosevelt Station about 10:AM in company with Dave Madsen & Babe La Hong; took horses to the top of Specimen Ridge & returned across the Lamar River Valley, north of Junction Butte.

Along the entire trip there were the usual signs of over-browsing; the high-water mark on all trees & shrubs & the dead stubs of young aspens. But the grass was in splendid condition. Many elk antlers were seen scattered all over Specimen Ridge. Several bands of elk, numbering up to 15 in one band, were seen. 5 elk calves of this year were found. Three of these were running with the herd & must have been from 1-2 weeks old. One young one was found in the grass almost at the top of Specimen Ridge. It bleated when we stroked it, but did not run away. It was perhaps 2-3 days old.

Returning by Trumpeter Lake, we saw the swan on its nest, about 3:30.

There were intermittent snow storms all day & the day was cold.

19 antelope were seen in a band near Trumpeter Lake, but no calves found.

# Trumpeter Lake



Yellowstone June 3, 1932

This afternoon, Griswold & I drove out to Trumpeter Lake. Trip, from 3:00 PM – 8:00 PM. Nothing of interest was seen on the way out. The Arnolds said they had seen an antelope calf on June 2, the forenoon day.

At Trumpeter Lake, we saw a band of 5 elk cows with 3 calves. The ~~colts~~ calves were running with the adults. Tracks to the waters edge seem to indicate that elk come to the lake to drink.

The swans were hiding in the tules, having left their nest when we approached the lake. This is the first time I've ever seen them hide with their necks down, as a goose will do when on the nest. Usually they stretch their necks as high as they can, and are very conspicuous.

Returning, 7:00 PM, a pair of Canada geese with 3 goslings were seen by the first lake east of Yellowstone River, by Cook City road. They did not fly, but held their necks low, and sneaked away, taking their young with them. The Arnolds reported seeing goslings in Slough Creek valley this week.

Yellowstone June 4, 1932.

The party included Mr. & Mrs. Baggley, Mr. and Mrs. Madsen, Ranger Franke, Anderson, Mr. Ryan of the fish hatchery, a boatman, George Wright to myself, 7 in all. The day started wonderfully sunny, but a hard hail storm came up about 2:00 P.M. just as we were leaving the lake. Hail balls were about ½ inch long, and were driven by a hard wind. Our trip, ~~was~~ by boat was from Lake station to Clear Creek Fish traps, to Molly Island & return direct. The fish traps were just being installed at Clear Creek.

At Molly Islands, the white pelicans were nesting on Gull Island this year, whereas they nested on Pelican Island last year. It is reported that they vary between these islands from year to year. No eggs had hatched yet. A census of the birds & nests of the island revealed the following:

| Birds | Nests occupied | Eggs |
|---|---|---|
| Pelican | 126 | 232 |
| | (30 of these nests contained 4 eggs each) | |
| Canada Goose | 1 | 5 |
| | 1 } Gull Island | 4 |
| | 1 | 3 |

Mammoth to Molly Islands 236

Yellowstone June 4, 1932.

| Birds | Nests | | Eggs |
|---|---|---|---|
| Canada Goose | 1 | | 6 |
| | 1 | | 4 |
| | 1 | Pelican L. | 4 |
| | 1 | | 3 |
| | 1 | | 2 |
| Calif. Gull | 564 nests; eggs not counted | | |
| Farallon Cormorant | 1 | | 3 |

Two Caspian Terns were seen on the islands, but their nest (if there) was not found.

We counted 180 White Pelicans at the colony. As many of them were away fishing, as was probable, the colony is at least 250 birds this year. This would coincide with the 126 nest count, that is, allowing 2 adults per nest.

A census of waterfowl was taken from Mammoth to the islands:

| | | ♂ | ♀ |
|---|---|---|---|
| Canada Geese | 5 | | |
| Mallard | | 6 | 3 |
| Coot | 1 | | |
| Green-winged Teal | | 1 | 1 |
| Barrow's Golden-eye | | 1 | 1 |
| Trumpeter Swans | 2 | | |
| Harlequin, by Cataract of Yel. R. | | 1 | 1 |
| Am. Merganser | | 5 | 3 |
| Unidentified | 5 | | |

Yellowstone June 4, 1932

About 2 miles below the Cataract of the Yellowstone River, two male American Mergansers were seen to catch a fish & struggle & flounder with it. A gull flew in to take it away from them. At this juncture a Bald Eagle swooped, snatched the fish & flew away with it.

10:30 to 2:00 P.M. June 6, 1932.

To Trumpeter Lake

Today started cloudy. It rained & snowed from 12:30 to 4:00 P.M.

En route to Trumpeter Lake, just about half way down the east slope of Crescent hill we met a very large female brown bear with 2 cubs. The cubs were thin, and much darker than the adult. She was a light tan, with very long prime coat and in wonderful condition. A car stopped behind us to take her picture. She put her fore paws upon the glass & looked in, but the cubs did not come near the car. No one tried to feed them, and they soon went off into the forest. These are the first cubs I've seen this season, & I've seen only 2 bears previous to this. Am anxious to see if she develops into a "hold-up" bear.

## To Trumpeter Lake

Yellowstone June 6, 1932.

At Trumpeter Lake, where Griswold has been stationed for 5 days, one swan was on the nest at 12:30 PM, and the other one was feeding nearby. The swan on the nest left it about 5 minutes after our arrival. Griswold reported that the third swan (possibly last year's surviving young one) had visited the lake 2 or 3 times.

## To Trumpeter Lake June 7, 1932

Leaving Mammoth at 3:30 PM, I saw an adult black bear by the church. This is the first bear I've seen in Mammoth this spring, although they were here before I arrived. (See notes of G.M.V.)

Rain had been falling all day, & most of the night previously. The swans were at their usual posts (one on the nest, one feeding nearby) when I arrived at 4:30 PM, and until 8:30 PM, when I left the lake.

Antelope and elk were feeding everywhere in the meadows. Later in the evening, many of them were bedded down in the open, apparently heedless of the rain.

From 5:00 PM to 7:00 PM, I covered the moraine country between the

Thompson



Yellowstone June 7, 1932

Cooke City road and the junction of Slough Creek & the Lamar River. The 2 little, muddy lakes in the junction corner had a narrow fringe of tules, and a small bluff island. Only 1 unidentified duck was on the water as I approached & it flew away. Killdeers & Spotted Sandpipers were around the margin.

As I first left the road, a coyote watched me from the brow of the hill. It kept retreating but watching the rest of the evening. It was seen 6 times, after disappearing each time. Elk cows and new born calves were scattered all through the region, as well as antelope. A den (very probably coyote) was found under a large boulder in sage brush 6 ft. high. This den is almost in the center of this moraine country. An elk calf was hiding within 10 feet of the den. The den shows signs of current use. I hope to watch it this summer to find what the coyote does to the game of the little region. Griswold reports seeing a pair of coyotes in the same area the previous day.

hompson



Yellowstone June 7, 1932

We frightened an elk calf out of hiding, and immediately one of the coyotes chased it. The calf squealed as it ran, and the cow returned just in time to drive the coyote away, according to Mr. Grinnell.

The badger den, see p. 222, was again open, and showed signs of current use.

Trumpeter Lake June 10, 1932

Knight, Grinnell, & I drove to Trumpeter Lake, arriving there about 12:00 N. One swan was on the lake, the other was not there, although we saw one swan an hour later on the big lake ½ mile east of Trumpeter.

Knight went out to the nest found 4 eggs covered, & photographed them. One was placed in the water & nearly sank, showing that incubation is not very far advanced.

mpson

June 11, 1932.

See notes of J.M.H. for swan material. We counted 21 swans on lower Redrocks. Lugar, custodian of Addle-Wild Duck club is sure there are at least 50 swans in the Redrocks region.

En route to Redrocks we saw 2 swans on Hennis lake, side next McGinnis. Black-headed Grosbeaks were seen near Sherwoods Mansion.

10 pairs of Scaups were seen courting in a little pool next Hennis Lake, north side. Both males & females (but most pronounced in males) jerked the head forward & snapped the bill. Pairs left a few at a time until none were left.

A Long-billed Curlew was seen not far from the scaups.

Ground-squirrels (Citellus elegans?) were very abundant, especially around Redrocks. Several ~~Dark-phase~~ Ferruginous Rough Legs were seen. One four was repeatedly attacked by a pair of Redtails. The latter kept swooping on the former from above. One Ferruginous Rough-leg lit on a post and a magpie drove it off. One Redtail had a mouse by the tail and flew around with it several minutes. A magpie kept lingering, but did not

Simpson

June 11, 1932

attack. Many Sparrow-Hawks were around Redrock. Curlews were heard constantly. Sugar reported, perhaps, 20 pairs of Sandhill Cranes in the vicinity. He says they do not nest with the swans but back even in the fields. Other birds seen or heard were:

Robin
Willow Goldfinch
Audubon Warbler
Sage Thrasher
Warbling Vireo
White-crowned Sparrow — the crowns were so large & white that the whole head appeared white in back. the wings were heavily mottled, and the tail long, & slightly reddish brown.
Red-shafted Flicker
Mt. Bluebird
Traill Flycatcher
Cinnamon Teal
Red-wing Blackbird
Yellow-headed Blackbird
Brewer Blackbird
Coot
Crow
Goshawk
Killdeer
Spotted Sandpiper

Thompson

June 11, 1932

Cassin Purple Finch
Mallard
Tern (unidentified sp.)
Barn Swallow (collecting mud for nests)
~~Bo~~ Tree Swallow
Pine Siskin
Pileolated Warbler (Pileolated)
Vesper Sparrow
Great Blue Heron
Sea Gull
Meadow Lark

Sugar says the pelicans do not nest in the region, but that thousand begin to come in each season about this time. He does not know where they nest. I can't understand where thousands could come from either.

1 mammoth seen.

Sugar reports that about 60 badgers were taken from the vicinity last winter. Also, many coyotes. We saw no deer nor elk the entire day.

Cattle raising is the main industry of the region.

mpson

June 12, 1932

For this trip, on which we saw 7 resident Trumpeter Swans, see notes of J.M.S. Carl Russell reported seeing 58 Swans on Yellowstone River just below the lake, about 4:00 PM in the afternoon. We also saw 1 Sandhill Crane by Henrys Lake.

~~Lake of the~~

## Trumpeter Lake

June 13, 1932.

Arriving at the Lake about 6:15 P.M., I found no swans. I waded out to the nest & found the 4 eggs well covered & still warm. The nest pile of tules is about 12 ft. in diameter and about 18 inches high. It is quite dry, and very clean in spite of having been used for several years. Just as I left the lake, one swan soared over head, called loudly, & settled in the water. It kept calling for half an hour, at which time we left the lake because we could not wait to see it go to the nest.

Griswold had a half grown Magpie which he had found along Slough Creek, out of the nest. The little bird rode everywhere on Griswolds shoulder without fear. He had fed it hard boiled egg. We returned it to a nest with 3 other young ones. The nest

Yellowstone June 13, 1932

is made of sticks & twigs with the opening on one side. The whole is about 16 inches in diameter, and rests in the crotch of a tree about 10 feet from ground.

We visited the coyote den (see p. 239) and found recent traces in it. Many elk and calves are in the region, as well as antelope. While watching from the den, I saw the coyote down at the bend of Slough Creek. It was running back and forth, as a dog plays, in front of a number of Canada Geese which were in the river. There were 3 pairs with families of goslings, 5 in one, 3 in another and 2 in the third, as well as several other adult geese. The coyote played for about 10 minutes, while the geese honked loudly and swam to within 10 ft. of the bank where the coyote sat. Once he ran up toward a band of about 20 elk with calves, as if to chase them. They ran a little, but seemed quite accustomed to the coyote. Then he ran back to the geese, played a few minutes & then disappeared behind the trees. He was not seen again during the evening. This was late dusk.

mpson

Yellowstone June 13, 1932

Grinnold showed me a Spotted Sandpiper's nest with 4 brownspotted eggs. The nest was in the grass about 10 feet from the River bank (Slough Creek). He had also found another one on the opposite shore.

As we returned, it had become quite dark. A young badger, looked about 1 year old since it was $\frac{3}{4}$ the size of an adult, was blinded by the lights just as we approached the Yellowstone River bridge. The badger was confused, but finally started to run across the bridge. It attempted to jump through the iron lattice of the railing, then ran on up the road. Grinnold got out and chased it for about 200 yards to see how fast it could run. He easily outlook it. It ran ahead of the car for about $\frac{1}{4}$ mile, then disappeared in the dark.

A few miles west of Crescent Hill a band of elk cows crossed in front of the lights. I could not count them all but I thought there were about 20 adults & 10 calves of this year. Three of the calves were confused & walked in front

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Yellowstone June 13, 1932

of the lights. They are still faintly spotted, although not so pronounced as on a fawn. Their rumps are quite creamy white. They were beautiful little animals.

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Lake of the Woods
Yellowstone June 14, 1932.

Trip from Mammoth to Norris via Lake of the Woods trail.

5 Moose were seen in Willow Meadow by Obsidian Cliff. Two of them showed antlers about a foot long.

On the trail, about ½ mile south of the road, we saw 3 elk cows. They were eating grass, although there was an abundance of succulent weed growth interspersed with the grass. Just before reaching Lake of the Woods we saw 3 more elk cows and 3 bulls. The bulls had antlers about 18 inches long, and well forked with at least 2 tines and possibly 3.

Lake of the Woods is about ⅓ mile long, rimmed with coarse grass, has no rushes, and appears to be unsuitable for swan nesting. It is entirely surrounded with lodgepole forest.

npson

Yellowstone June 14, 1932

and is one of the most beautiful, ~~scenic~~ secluded lakes we've seen in the park. Barrows Goldeneye, Mallards, and an unidentified shore bird were on the lakes. The Goldeneyes did a great deal of fighting & diving. Just as we were ready to leave 2 swans flew down and settled on the lakes. One muffled call was uttered just before they alighted. They immediately separated and fed at opposite sides of one end of the lakes, 10:05 A.M. In about half an hour they drifted together. The male began bowing repeatedly, a courting gesture we supposed. This lasted about 2 minutes. He then swam to the female, and they mated. This was done as follows. The male was on the female's back; she momentarily sank, came up; the male spread its wings; then both heads stretched forward and upward as far as they could reach; both pairs of wings spread simultaneously, and while they were both in this position, both swans called simultaneously 3 or 4 times. Then the male released & slipped into the water. It appeared as though the male grasped the feathers of the

npson

Yellowstone June 14, 1932

back of the female's head, as other birds are want to do, but we could not be sure. The call notes were low and ringing, a much more musical note than the blaring staccato note of the frightened bird. From the first bowing gesture until the completion of the mating was perhaps less than 5 minutes. The birds were exceedingly beautiful and graceful in all their actions.

After mating, the female stood on the shore several minutes preening. Then both birds fed until 12:45. At this time they sighted us in the forest, and began to call sharply. They had wandered within 60 feet of us before they saw us. Instead of flying away, as they usually do, they swam back & forth in front of us 4 times, very slowly, calling sharply the entire time. Their calls were quite regular, but one often called just a fraction of a second after the other, as in syncopated time. This curious investigation continued until 2:45 P.M. Some of the time one stood on the bank about 50 yards from us & watched while the other fed.

Lake of the Woods 250.

Yellowstone June 14, 1932

Much of the time both birds preened while floating in the water and calling. They would call even when their bills were buried in their feathers. The bill was repeatedly dipped in the water while preening. The nostril was nearer the tip than the base of the bill. A lump was on the bill between eye & nostril but the entire bill and eye were jet black as were also the feet. During the preening there was much yawning and stretching of feet and wings. One swan lay partly on its side in the water and stretched its foot out above the water several times. When the bills were wet they were very flashing in the sunlight. The eyes and lumps (lump about same size as eye) sparkled repeatedly.

As near as we could tell, the birds were pulling some sort of aquatic plant from the bottom in their feeding. Grass was seen in the bill of one once. Sometimes they tip up as surface feeding ducks do.

At 2:45 we had to leave the lake. The swans followed us completely around the lake, calling.

Thompson

Yellowstone June 14, 1932

About 8:30 A.M. we had seen a pair of swans on Swan Lake. The pair at Lake of the Woods flew in from the Swan Lake direction. At 5:15 PM the pair were not seen at Swan Lake as we returned. Perhaps the same pair ~~were~~ was seen at both lakes.

Continuing on down the trail toward Norris we saw 3 different sizes of bear tracks. One bear must have been a grizzly since the tracks was so large, and claw marks prominent. The other two were smaller. At a small stream where a new bridge had been built beside the trail, and a 10" log remained from the old bridge the bear tracks, and 1 coyote track led to the log.

Elk & deer tracks were seen all along the trail. The bear tracks followed the trail for about 4 miles, and led to Norris. Several bands of elk were seen in the big open meadows. Perhaps 100 elk were seen on the trip. They would sight us ¾ of a mile away, even though we were in the edge of the forest. The trail follows an old road. Today was sunny. Thunder showers came up in the afternoon.

Thompson

Yellowstone June 15, 1932.

The proposed trip to Grebe Lake was abandoned today due to ~~the~~ snow in the forest. McCarthey ranger at Norris, said he thought it would be very difficult to get over the trail. We therefore went to the 6 mile post on east entrance road, and hiked back down Pelican Creek. Griswold circulated through the Lake region to see what bears are doing.

The day was disappointing from the wildlife standpoint. About 30 elk were scattered through Pelican Creek, feeding. Two calves were seen at a distance. All elk ran and snorted at our approach.

Two moose were seen within a mile of Pelican Creek bridge in the large willow swamps. One was a fine large bull with antlers about 1½ feet long. Both moose still retained part of the winter coat.

Several beaver houses were found in the willow swamps. One, a bank lodge about 5' across by 18" high was on our bank of Pelican Creek. 100 yards down-stream on the other bank was a similar house constructed of willows. We removed the roof

from the near house. As we did so a large beaver swam out, and downstream to the other house. The roof was quite thin. The inside of the house was a mere depression in the bank just above water. Some fresh grass was scattered on the floor of the house. The nest was clean. A slight beaver odor pervaded the nest. The room was just large enough for an adult beaver to turn in comfortably.

Only 2 Canada Geese were seen on the entire hike, which was in contrast to the large flocks of 40-70 seen about the same time last year.

About 10 American Mergansers were found along the river, a few mallards, 1 pair of buffle-heads, many pairs of Barrows Goldeneye, many courting spotted sandpipers, a few Calif. gulls, and a number of crows and ravens.

Bear and coyote tracks were each seen once along the creek. Pelican Creek was high & muddy — fishing was unsuccessful. Two white pelicans and 1 kingfisher were seen on the trip also. Thunder storms in the afternoon.

Thompson

# Trumpeter Lake



Yellowstone June 17, 1932.

Yesterday evening Griswold went to Trumpeter Lake, after an absence of 2½ days. The swans were gone from the lake, and the eggs destroyed. One egg was found in the nest, broken. one was found on the rim of the nest also broken. a third was found under water, about 25 feet from the nest, also broken. the fourth was not found. There was no fluff.

Today, Griswold & I returned to Trumpeter Lake. No tracks, sign, nor feathers of any possible enemy were found. The fourth egg was finally found on the island, about 200 ft from the nest. It was broken in (3 inch hole on one side) with a few pieces of shell in the grass beside it. Shell was clean inside. One of the eggs Griswold brought in last night contained a partially formed embryo; another had blood vessels around the inside of the membrane. The eggs could not have been more than half incubated.

Judging from this scattered distribution of the broken eggs, I am inclined to believe that a raven or crow, or some bird, broke up the nest. It seems to me that an otter or mink would have sucked the eggs in the nest & have broken them more than they were. It looks as though, perhaps, several ravens

Yellowstone June 17, 1932

or crows (many crows in the valley this year) had robbed the nest in the absence of the swans (both swans have been leaving the lake for hours at a time this season, perhaps due to the late spring & scarcity of food), had broken the eggs & attempted to fly away with the embryos. This would account for the scattered shells.

This morning, the swans were feeding quietly on the lake. They did not go near the nest at any time up till 4:00 PM, when we left, nor did they show much excitement at our presence.

Wright suggests that possibly the nesting instinct is ~~dead~~ diminishing since it is already 8 days past the hatching dates for the 2 previous years. Even if the young had hatched & matured successfully, they would have been so late that it is doubtful whether they could have flown by winter.

I thought I saw an excess of bowing as though courting gestures were still in evidence. Am not positive about this point.

Portion of a muskrat? skeleton was found on the island. The skull had been

Thompson

Yellowstone June 17, 1932.

made this spring. A freshly broken coot's egg, and a pickled Pied-billed grebe's egg were also found on the island. One Pied-billed grebe was seen on the lake; one Eared grebe, and the usual population of other nesting birds, which will be recorded in a census to be taken soon.

Trumpeter Swan excreta contained many tule seeds, other vegetable matter and some young green sprouts of water plants (unidentified).

Dr. F.R. Cagwin returned to the lake with us about 1:00 P.M. The broken shells were put in the nest & photographed.

One coyote track was found on the elk trail by the lakes. Coyotes called to each other from the hills north of the Lamar River about 1:00 P.M.

Tower Redrock Lake
Montana

257

Thompson

June 18, 1932

Arrived at Lakeview about 11:20 AM, and went to the Montana club. Mr. Tibbets the custodian said there were only 9 Trumpeter Swans (which does not agree with Seager's account). He also said that many swans have been killed by hunters. He himself has killed many pelicans on the lake because he says that they were taking the grayling which came up the river to spawn. I saw 23 pelicans on the lake today.

We found 2 swan's nests, each with 4 eggs, and one pair of adults with 4 cygnets which appeared to be 2 or 3 days old. One of the swan's nests was made entirely of marsh grass. the other was mostly of tules with a lining & covering of grass. This latter was measured & photographed.

Measurements:

| | |
|---|---|
| Bottom of nest | 6' 3" + 6' 1" |
| Crown of nest | 2' 1" |
| Depth of nest | $3\frac{1}{2}$" |
| egg length | $4\frac{1}{2}$" |
| Circumference, small end of egg | $2\frac{3}{4}$" |
| " , large " " " | 3" |
| " at largest place | 6" |

Eggs were buff colored, ~~olive~~ blood stained.

A blind consisting of umbrella covered with green cloth & tules, was constructed

June 18, 1932.

36 ft. from the nest. Davis & I then left and Dr. Castler stayed in the blind. In an hour, one swan returned to the nest and after considerable investigation it climbed on the nest watched a long time, then dried off the breast with the necks bill, & settled on the covered eggs without uncovering them. After some minutes, it pushed the eggs aside with its feet & settled for incubation. After some time Dr. Castler made some move to frighten the swan. The swan showed no fright, but hissed & spread its wings. It came almost up to the blind, back & forth, hissing & spreading the wings. Finally he was forced to frighten the bird away from its incubation because it stayed so long.

Other birds seen on the lake today:

Canvas back
Mallard
Scaup
Redhead
Pintail
Shoveller
Ruddy
Coot
Eared grebe
Pied-billed grebe
Black tern
a white Tern (unidentified)
Rule Wren
Curlew

Upper Redrock Lake
Montana



Simpson

June 19, 1932

This morning I hiked up the road about 6 miles to a ridge overlooking the lake, to look for swans. The day was rainy and the lake so rippled that I could not see the swans. They are only visible in sunlight. After hiking around the west side of the lake I found 4 pairs of swans, one pair of which had 3 or 4 cygnets — they were too far away to discern plainly. With the 7 pairs which I know to be on Lower Redrock this makes a total of 15 adults and 7 cygnets seen yesterday and today. There are probably more. Other birds seen:

Green-winged Teal — one pair had 11 young.
Blue Winged Teal — several (Blue-winged)
Cinnamon Teal — several
Baldpate — many
Scaup — many
Mallard — many, with young
Gadwall — 1 pair
Redhead — 1 few
Coot — many
Curlew — about 50
Willett — perhaps 100
Wilson Phalarope — perhaps 25
Sandhill Crane — 6 back in the fields.
Bufflehead — 2
Canada goose? 1 seen at a distance. The swans with cygnets kept chasing it.

Thompson

Lower Redrock Lake
Montana



June 20, 1932

This morning, 10:00 AM, we returned to Lower Redrock Lake. The swans by the blind left as soon as we came, and did no incubating until after 5:00 PM when we left. However, the day was warm and sunny, and the eggs were covered. I don't think that any harm was done by the disturbance. Dr. Rostler secured still ~~pictures~~ pictures today of the adults & the young of another family which Davis and I found & caught.

When we chased the family with 4 cygnets, one adult took 3, and the other took 1, then they separated about 1 mile apart. We took the 3, and left the one. The adult stayed with the 1 young for 2½ hours, leaving only once, when it flew away (toward the other adult) but returned to the cygnet in about 15 minutes. Later, we returned the other 3 cygnets to the 1 and left. The adult from which the 3 were taken did not return from the place where they had been taken. I suppose it was looking for them. Am anxious to ascertain the results of so much disturbance.

Davis found a swan nest with 2 eggs buried deep. They were ice cold. Whether these were left after the 4 cygnets hatched, or whether it was a different nest, we could only surmise. But being

June 20, 1932

sure that the eggs were dead, we took them.

During the afternoon I counted, definitely, 11 swans (adults), and 4 cygnets on the Lower Lake. I do not think that the Upper Lake birds were flying back & forth. Counting also, the 8 adults & 3 cygnets of the upper lake, there is a total of 19 adult swans and 7 cygnets actually seen on the 2 lakes. There may be more.

# Yellowstone Loop



June 22, 1932.

Today I drove around the loop with Mr. Roahen, Federal Game Protector for Montana & Wyoming. We omitted the Tower Falls portion, & returned from Canyon to Norris. Roahen fished in Isquam Lake for about an hour & caught his 10 fine Cutthroats. The fish were in good condition. The lake has been opened since June 20, after being closed for at least 3 years.

We saw 2 black bears at Norris, 2 at Lake & one adult with 3 black cubs on the Old Faithful - Thumb road. This last family looked exactly like the family of 3 black cubs seen at Obsidian Cliff on June 10th. However it hardly seems probable that this is the same family.

For June 23-25 see Fern Lake notes of G.M.K. We saw 13 Swans on the Fern Lake region. The otter episode also.

Molly Island

mpson

263.

Yellowstone June 26, 1932.

Trip to Molly Island. Party of:
Mrs. Madsen, Miller, & Foster.
Mr. Madsen, Al Elliott, Frank Anderson,
Thompson.

Young Calif Gulls were running all over the island. Some got in the water & swam about. Young Pelicans, still naked, were out. But the hatching was not complete in either gull or pelican colonies.

Census disclosed the following:

| | | |
|---|---|---|
| Pelican nests | | 103 |
| " | eggs | 58 |
| " | young | 121 |

Sixty-nine young gulls were banded. Band numbers were 618632 - 618700 inc.

The lake had risen so much, that the southwest Canada Goose nest was flooded. All geese nests were empty. One cormorant nest still had 1 egg. Two cormorants were seen flying away as we arrived. Two Caspian Terns were again seen. Also 2 Willets, 1 Phalarope & Spotted Sandpipers (these latter three on Pelican Island)

Old Faithful
Bear Feeding Ground



June 28-

Trip to Old Faithful to hear Baggley's winter talks. Martindale's lecture attended— poor crowd, no bears most of time, millions of maquitos. About 5 grizzleys seen during the evening. Next morning, incinerator & Premises very clear. Expected to see 2 griggly cubs the which had been reported, but no luck. Walked all morning back in the woods behind inc and feeding grounds. Saw not one single be although bear tracks were abundant, all leading up hill away from feeding ground Covered territory 3 miles back. Bears must c considerably during night & day, but return ea evening to feeding station.

June 30 4 Willets seen near Alder Lake.

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Continuing June 28, 1932

On the morning of June 28th I drove to Trumpeter Lake to get the tent & look over the territory. The swans were on th first lake west of Trumpeter Lake. They were feeding calmly. Arnolds reported seeing them several times in the region & the eggs were broken.

Ad blackbear with cub & one brown bear with twin cubs were watched on hold-ups abo 1½ miles west of Tower Station. All bears were see to eat some grass & shrub tops at intervals. A pair of nesting Juncos grew excited, which suggested to me that the bears are a menace around nesting birds.

20170507

# Yellowstone Lake
## Flat Mt. Arm and Elder Lake.

June 30, 1932

Today we went by boat from Lake to Flat Mt. Arm of the Lake. 5 White Pelicans were encountered along the Flat Mt. Arm, and a number of Mergansers. About 100 Canada Geese were seen at the west end of the arm. Several were seen to scuttle away with heads down. One such was found to be molting. 2 Sandhill Cranes were seen at the west end of the arm. A Golden Eagle flew over for some time & was finally attacked by an Osprey. The Ospreys abound at arm. Many Osprey nests are scattered all through this region, which is mostly an old burn of 1914. Young lodgepoles are coming in thickly, but an immense amount of standing dead timber still exists.

A small lake just north of the west end of the arm was visited. The lake is about ½ mile long shallow and ringed with pond lilies. It does not look like a nesting lake.

About 30 elk have been seen in the region. One band of 15 cows had 4 calves. Grass is plentiful for them.

About 50 Mergansers have been seen during the day.

olmp507

July 1, 1932

Boat from hotel to bay nearest east end of Delusion Lake. Hiked about 1 mile up dry stream to Delusion. The lake is very clean with sandy beach, & lodgepole forest all around (some fir & spruce also). Fished all day without anyone catching a fish. Party consisted of Baggley, Madsen, Foster, Joffee, Ida Rose, Knight & Thompson.

From 11:00 PM to 4:PM, I hiked up to the west end of the lake — about 4 miles, no trail but elk. Many elk tracks seen, also tracks of deer & bear.

Two male American Mergansers were at west end of lake. Two pairs of Trumpeter Swans were found feeding in the coves on the southwest end. There were no nests nor young. The west end marsh is grassy, but no tules. Doesn't seem suited for swan nesting.

Beavers have been cutting young lodgepoles recently & for a number of years past in the west end region. An Osprey & a few Gulls were over the lake.

At the sands spit on Yellowstone Lake just east of Delusion we saw fresh otter tracks. Day clear & sunny.

(over)

In the evening, the Lake bear feeding station was visited. Eleven grizzlies had been there during the evening. The female with 2 cubs came in late. The cubs climbed a tree & stayed there while the mother ate. Curiously enough she appeared to send them up the tree by sniffing loudly (like a brush on a coarse surface). After eating for about 15 min she was driven from the platform by another late comer. After definitely retreating, she sniffed in the same harsh manner, & the young ones immediately came down. To every one's interpretation, this was clearly a language communication.

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Three swans were also seen behind the sandbar about 4 miles east of West Thumb along the highway. Dr. Kelly reported seeing them there about 5 days previously.

Thompson

# Riddle Lake



## Yellowstone

July 2, 1932.

Trip to Riddle Lake with Wright and McCarthey, ranger from Norris. Only a blazed trail leads in from the S.E. road, about ¼ mile south of continental divide. Mosquitos very bad, as they have been everywhere this year. Arriving at the south end of the lake we saw nothing but marshy country gradually opening into the lake proper. It is an ideal swan & crane lake. An old beaver house was in the south marsh. Grass & rushes predominate with a large scattering of pond lilies. The lake appears to be quite shallow.

At the north end, we saw a pair of swans with 4 cygnets, very young. They were wary, & started moving away when we were ½ mile away. We had been at the lake over an hour searching it carefully with binoculars before we saw the swans. They should be successful at this lake.

Other birds seen on the lake;

mallards — 100
gadwalls — many.
Barrows Goldeneye - few
Buffle Head — 1 pair
Coot — 1
Green-wing teal — 1 pair
Coots — several
bald eagle — 1.

Yellowstone. July 4-5, 1932.

The canyon bear feeding ground was visited between 8 & 9:[illegible] P.M. Seventeen Grizzlies had been to the platform during the evening. Between 5 & 8 were visible most of the time we were present. The ranger on duty said that 3 sets of grizzly triplets had been coming in regularly, & [redacted] 2 sets of twins.

The Canyon station is the most picturesque & natural of the three. It also seems the safest. Bear trails enter the arena from several directions. Each trail has a line of grass growing in the middle between the 2 foot depressions. The trails branch & cross each other considerably, but in the main seem to lead back a mile into the forest before disappearing. We are under the impression that each bear or family comes & goes along the same trail each time. Further investigation will be necessary to test this.

The following morning we visited incinerator, all developments at canyon & hiked a couple of hours behind bear feeding station. No bears seen back in woods. But 5 [redacted] blacks were seen along roads & around camps.

From 7-8:30 AM of July 5th, I watched

Yellowstone July 4-5, 1932.

the Osprey's in Yellowstone Canyon. All young had hatched & left the nests. Several of what appeared to be young were flying around the canyon. They swooped from higher to lower elevations, mostly, & seemed very uncertain of the landing in each case. They flew over the stream but did not try to catch fish to my knowledge. One finally flew to the nest & preened for about 10 minutes. Another one (apparently adult) sat about 50 yards away & called incessantly. Finally the juvenile flew across to the adult, seemed uncertain of the landing, then lit on the adult's back, where it balanced for about 30 seconds. It then got off & stood in front of the adult. The adult had made no effort to disengage itself.

Thompson

Mammoth to
Snake Entrance.



July 6, 1932

A census of all birds & mammals seen from the moving car was taken. There was surprisingly little.

| | |
|---|---|
| Redtail hawk | 2 |
| Swainson hawk | 2 |
| Cliff Swallow | 60 |
| Brewer Blackbird | 7 |
| Robin | 10 |
| Barrows Goldeneye | 40 |
| Junco | 3 |
| Calif. Sea Gull | 98 |
| Scaup | 4 |
| Mallard | 14 |
| Raven | 1 |
| Golden Eagle | 1 |
| Osprey | 5 |
| Pelican (American White) | 5 |
| American Merganser | 1 |
| Mt. Bluebird | 7 |
| Wood Pewee | 1 |
| Warbling Vireo | 1 |
| Audobon Warbler | 1 |
| Spotted Sandpiper | 2 |

Mammals:

| | |
|---|---|
| Marmots (of which 1 was melanistic) | 5 |
| Rocky Mt. Mule Deer, last yr. fawn | 1 |

Black Bears, 9, of which the distribution was as follows: Brown phase 4. Black phase 5. One of the blacks was

July 6, 1932

last years cub, and one was a cub of this year following an adult. These bears were all on the roads & were typical "hold up" bears.

We watched the mother & cub for about an hour. Every car which came by stopped to see the bears. Most tried to at least get pictures. 5 cars fed the bears. In each case of feeding the mother bear would stand on hind feet & put fore paws against the door. Between cars, both mother & cub would eat berries. (These were picked for specimens to be identified). Once while we were trying to get a picture of her, the mother bear expelled our lunch. In spite of my standing on the fender shouting & waving my arms, she came up to the car & stood on her hind legs peering in past me. I ran around to the other side of the car to grab the lunch (& to get the body out of her way) but she got the lunch first. We grabbed the shovel & chased her, yelling & running. Cub climbed the tree. Tourists laughed. Bear ran holding lunch in mouth. Finally she accidentally dropped part of it, then turned to retrieve it

Mammoth to Snake Entrance

July 6, 1932.

in spite of both of us, then ran the other way. A few minutes later she returned to the road & continued her hold-ups. She seemed unaware that anything had happened. Finally we had to leave the observation to get lunch at West Thumb.

She was not malicious toward anyone but just taking everything she could get & ignoring people, without a sign of fear. She has already become dangerous, it seems to me, because of this total lack of fear.

Jackson Lake

July 7, 1932

The lake where the swans nested last year, about 6 miles northwest of Moran, was visited this afternoon. The swans had one cygnet only. Their heads were stained quite reddish brown & they were almost invisible in the water lilies. Charles Fessler of Moran says that the thirteen 2 of last years cygnets went over to Jackson Lake, & may have been the 2 young ones which wintered with 2 pairs of adults at the upper end of Jackson Lake by some hot springs. One other pair (Marie's pair) tried to winter further south on the lake & perished.

Thompson

# Jackson Lake

272.

July 7, 1932

~~A beaver~~

Fessler concurs with Marie & Woodring in saying this pair is the only nesting pair in the region. No swans are on Emma Matilda nor Two Ocean Lake this year, nor on the Beaver house lake east of Leeks.

A Beaver at the swan lake today was seen eating the pond lily blossoms, and carrying them to its house on the island. Perhaps it feeds them to the young ones. This is our hypothesis only.

Two moose and an elk fed in the lake this afternoon. Finally swam across. Only their heads showed above the lily leaves. We could not tell for a certainty that they were eating lily pad leaves, but they appeared to be doing so.

One Great Blue Heron flew over the lake. No ducks nor loons were seen.

Fessler commented tonight that he had planted 500 fingerling Eastern Brooks in the swan lake last fall. We saw 3 people (one fishing) at the lake this afternoon. The track into the lake is now a road. Fessler thinks he may fall a couple of trees across the road.

Thompson

Jackson Lake



July 7, 1932

We also found an adult beaver skull by the lake, and what appeared to be a trap for catching mink. It was a wooden box about 2' x 6" x 4" with wire at one end & wooden slide door at other, & a trip inside. Remains of a fish was still in the trap. It had apparently been lost.

Old beaver dams stretch for perhaps 1000 feet across the swamp between the sway lake and the lower lake, as though there were a much larger lake a few years ago.

July 8, 1932

Moran to Mammoth

Polecat Creek was scouted in the swamp region above Flag. Swans were reported to be there, but we found none. The swamp appears to be ideal for swans & cranes. A Great Blue Heron rookery containing at least 10 pairs of herons was sighted on the south side of the creek in the tops of tall dead pine trees. They made a terrific squawking every few minutes, but they stayed in the tree tops.

Returning via Lake & Canyon we saw the same black bear & cub

orig 30 ff

July 8, 1932

of p. 270, in approximately the same place on the road, still holding up cars. Another black & cub were seen a short distance east of Thumb. In all, we saw 6 adults & 3 cubs in crossing the park— all were along the roads begging.

Stopping along the lakeshore for about an hour (between Thumb & Lake) we watched the Cutthroat Trout swimming & feeding in the last breaker on the beach. That is, each wave just as it rolled up & became translucent before breaking gave a remarkable side view of schools of fish feeding along the littoral. We had never seen this before.

## Slough Creek

July 9, 1932

Today I drove with George Bagley to the end of the Slough Creek Road, where we met Mr. Douglas of the Buffalo Ranch & hiked up to Slough Creek valley.

About 2 miles west of Tower Falls Station we saw the same brown bear & 1 twin cubs which I had watched on June 28th. They were still holding up cars.

From the stables to Slough Creek valley the forage was abundant — much of

the red, & white geranium, lupine, eriogonum, castilleja, & grasses. But the browse & young trees (aspen, rosa. especially) were severely hit by winter grazing. The grass in Slough Creek is cut each year for winter & about 80 tons were left over from last win since hay lands at the Buffalo Ranch are insufficient, it is planned, tentatively lead the buffalo around into Slough Creek to feed them there. The elk of Slough Creek are a safety valve herd. They are well fed all year, & some-what isolated from the other herds elk. In summer they range north of the valley mostly. George Bagley reported that elk are fed during the winter. Feeding is from early January to May. Jim Dupris is custodian of the lower Slough Creek ranch.

From there we drove to Buffalo Ranch to see the hay lands. They are densely packed, ground hard, & a thick sod cover formed. Bagley attributes this to long years of cutting without allowing reseeding. Hence the thick rooted sod formers have come to predominate. Experimental plots of Timothy, Hungarian Brome, Alsike Clover & a nurse crop of oats has been carried out. Unfortunately,

Thompson

West Thumb



July 11, 1932

Twenty-one bears are at West Thumb according to the rangers count. This is 14 adults & 7 cubs, including 1 yearling. Today, at the camp ground, I saw ~~[illegible]~~ one young brown which appeared to be about 12 yrs. old, 1 black with twin cubs (1 black, 1 brown), 1 large brown, 1 large black, and 1 cub which appeared to be lost. It remained in a tree for several hours. When it came down I was talking with Ranger Jack McNutt & did not see it.

John Jay reported taking a bear & cub down to the south entrance this morning. She had been troublesome. When he returned an hour later to the spot where he had liberated them, they were sitting in the middle of the road — typical "hold-ups." Jay also reported that a brown & a black had been deported within the last 2 weeks. Two bites have occurred on the Old Faithful - Thumb road. A woman had her hand bitten by the black with 3 cubs, as she posed for picture — this was day before yesterday. A man had his leg bitten a few days ago.

As I came by Shoshone Point

July 11, 1937

this morning, a large black and 2 good sized cubs were holding up. The cubs looked so large I could not decide whether they were 6 or 18 months old, but I think 18. Two cars were stopped, cubs in middle of road; adult standing by back car. Adult climbed on fender & then half way in front door. Just then man from front car ran toward bear & it bounded out. The two cars then went on. This is the usual incident.

At Thumb a large brown bear tore the upholstery on the truck seat while I was away. There was no food in the car, but the bear had been inside the seat.

The entire afternoon at least one bear was wandering through the public camp ground — sometimes several bears were in sight at once. Practically every tent was visited within an hour. Nothing was safe unless guarded. People in the camp ground did not seem to like the bears. They chased them away regularly. Several dogs were present but the bears ignored them. During the latter half of the afternoon I watched the black & twin cubs. They came

Thompson

July 11, 1932

through the camp grounds, lingered an hour near the stand, then wandered ½ mile toward Lake & returned by 6:00 P.M. Everyone stopped to see, photograph, or feed them. People showed no fear nor common sense. They flock out, surround the bears, get between the cubs etc., feed them about ¼ of the time. The bears of this family are a constant menace to everyone who does not know how to act. They will climb into any car if they have the opportunity.

All of the bears were seen to eat quantities of white clover throughout the afternoon, as well as the tips of grass occasionally, and even the tips of pine & fir.

There is no incinerator, but it is to be constructed. Garbage from Hamilton's store & the cafeteria is handled separately, each supply being hauled off & burned in pits. The govt. mess garbage is also burned in a pit. No one seemed to know how often the public camp garbage is collected, but I think it is collected only in the morning. Bears visited the garbage cans practically every hour of the day.

&

~~Post Thesis~~

Thompson

# Canyon



July 11, 1932.

George Baggley reported the bear situation very serious at Canyon today. This morning, there were 8 cars in the camp ground & 13 bears. He estimates at least 75 bears within a radius of 5 miles of Canyon. He thinks that at least 2 bears will have to be removed. Yesterday, one man was throwing peanuts to a bear, & he ran out. Immediately the bear charged him. He ran & was not injured. The food supply is very scarce. There is practically no edible food from the camp collections. Baggley has suggested soaking a sack of barley and feeding it with the garbage.

Comp 5017

Molly Island

280.

July 12, 1932.

52 adult pelicans flew off the island as we approached. Most of the young pelicans were between 10 & 20 days old. They formed in 2 pods just where their nesting grounds are. The nests on top of the island have not yet hatched. Apparently none of the young pelicans had been in water yet but a few took to water after we had been landing for some time. Some of them swam to Pelican Island — about ¼ mile. One banded one was found on the beach dead ½ mile south of the island. Apparently died of cold & exhaustion. We banded 100 of the young pelicans. Bands numbering from A716809 - A716899 inclusive. We counted 104 young, & 22 unhatched eggs. Some eggs picked by gulls while we on the island still had liquid yolks. The young pelicans disgorged fish when we approached. One fish disgorged by a young bird was 10" long. Some of the young are beginning to show black wing quills. Very few dead pelican young were found dead on the island. The mouths of many had patches of parasites in the pouch.

Young gulls were all over the island, & readily took to the water. They are much more precocious

July 12, 1932.

than the young pelicans. Two gulls banded last time were found dead on the island. Many gull nests still had clean eggs.

The 4 commorants, still unidentified flew off the island at our approach. We could not find their nests nor young.

Compton Crook counted 14 Caspian Terns on the island. 7 nests were counted.
1 nest with 2 eggs
1 " " 3 eggs
rest with 1 egg
1 nest with 1 nearly hatched young.

After leaving the island we rowed over to the mainland south & west. About 100 Barrows Goldeneye were in the bay. Canada Geese — about 50. 3 Marbled Godwits? flew over Pelican Island about 4:30 P.M. They were not seen again. Several pairs of Spotted Sandpipers are on Pelican Island.

Fish are abundant in these bays around the islands. We caught 7 in about 2 hours. They were good eating.

Crooke & Anderson found a white-footed mouse with 6 young (furred, ⅓ grown) in a down nest under a log on Pelican Island. She ran away with 4 young hanging to her teats. The nest was empty the next morning.

Molly Soland



Thompson

July 13 1932

No more pelicans returned to the island last night nor this morning than were there yesterday afternoon. A number of adults left the island yesterday evening & have not returned. This morning we counted about 60 adults on the island.

The gulls called & squaked most of the night. Rain or thunder seemed to disturb them & make them noisier.

The young pelicans gathered in pods for the night with the adults around them.

At dawn, a pair of Canada Geese with 4 small goslings swam by our island. 6 Mallards flew into the bay. Compton Crook reports a flock of about 20 Blue Winged Teal.

The birds on Gull Island are accustomed to us & are paying no attention to our camp on Pelican Island.

Mammoth to Washburn
to Canyon to Norris.

283.

Thompson

July 14, 1932

This morning Dr Castler & I drove to the top of Mt. Washburn to get coney pictures. When we got there the day had become so cloudy, cold & windy that it was impossible to find conies. The ranger on top of the mt. said that 5 adult sheep with 3 lambs had been seen in the morning. Thirteen had been seen a few days previously.

On the south slope of the mt. well up toward timber line, we saw a black bear & 2 cubs. They paid little attention to us when we stopped & made no effort to come to the car. They were all in good condition, & were eating herbage.

On the road to Canyon we encountered another bear & cub. They were eating and grass. The adult ate an Arnica? blossom also. These bears were typical hold-up bears, but they kept eating herbage as long as no one would feed them. ~~That~~ Fifteen bears, all blacks & browns, were seen in the Canyon region as we drove through. They were scattered around the camps, incinerator, & along the road. All were begging, and all in gaunt condition.

Along the Yellowstone River

July 14, 1932 Barrows

in Hayden Valley we saw a female Golden-Eye with 7 young about half grown. The usual Ospreys, gulls, 1 marsh-hawk, & 5 pelicans were seen.

From 6:00 to 7:30 PM we were at the Canyon feeding station. 7 grizzlies were waiting on the opposite slope when we got there. Various ones came and went before 7:00 when the feeding begins. 21 had been in sight before 7:00 o'clock. One large black wandered in the trees between us and the public benches. This one black eats with the grizzlies.

Grizzlies which visited the feeding table during the evening were as follows:

| adults | | cubs |
|---|---|---|
| 1 | with | 3 |
| 1 | " | 3 |
| 1 | " | 2 |
| 1 | " | 1 whitish |
| 1 | " | 1 yearling |
| 1 | " | 1 2yr. old |
| 1 lame | | |
| 10 others | | |

About 7:30, as we were standing in the trees to the right of the ramp,

July 14, 1932

one of the grizzlies with 3 cubs (and I think the one with the whitish cub) charged us from the feeding platform. We climbed trees to escape. Dr. Castler was almost dragged out of the tree before he could get out of reach. One toe had to be amputated, and the rest of his foot was slightly injured. The bear roared as she charged & fought, and reared up as high as she could to drag him out. For a few seconds she fled, as did every bear at the platform. We left the feeding station immediately. The attack was unprovoked except that we were standing in an unusual place.

It was apparent, however, all through the evening that the mothers with cubs were harrassed & irritable by the unnatural congestion of the feeding table. They were ready to charge at anything. The cubs often wander up around the ends of the ramp toward the audience, at which time the mother grizzly becomes frightened & more

July 14, 1932

nervous and the situation is exceedingly dangerous. The ~~sides of the~~ bleachers should be enclosed by a bear proof fence of some sort with only the pit and ramp left open toward the feeding platform. People are factually unprotected by the present set up.

As we drove home this evening we saw a band of several elk in the Norris Meadows. A few miles north of Norris, 38 elk were feeding in the meadow near the road. Two of them were bulls with antlers nearly fully developed. No calves of this season were seen.

In the canyon just below Virginia Cascades we saw a cow moose & calf. Four other adult moose & 1 calf were seen in Willow Park. This was about 8:30 P.M. The beaver from the house west of the long beaver dam by Obsidian Cliff was out in the lake.

One doe was seen near Beaver Lake, and one near Jupiter Terrace.

Thompson

Canyon

256.

Yellowstone

July 15, 1932.

This afternoon I drove to Canyon with George Baggly. At the ranger station we met Mr. Bryant, Supt. Toll, Mr Edwards, & Dr Bauer to discuss the Canyon situation. Dr. Bryant thinks there should be some way of abusing the bears such that they would become frightened & not loiter in the camps and along the roads. Mr. Toll thinks some such liquid gun should be perfected & asked that George Wright & I do so. None of them are yet willing to admit that any great expense for fencing camp areas & bear proofing garbage cans, parking areas, etc. is justifiable.

Dr. Bryants party left in a few minutes for Old Faithful. George Baggly & I went to the feeding ground. This evening there were more sets of cubs than last and the whole crowd of grizzlies more agitated. They constantly roared & fought, and rushed from the platform to the woods (to the left of the audience where no one was protected) and back.

Thompson

July 15, 1932.

Those present at the feeding station were:

| adults | | cubs |
|---|---|---|
| 1 | with | 2 |
| 1 | " | 2 |
| 1 | " | 2 |
| 1 | " | 3 |
| 1 | " | 3 |
| 1 | " | 2 yearlings |
| 1 | " | 1 yearling |
| 1 | " | 1 |

about 10 adults besides.

After the crowd had left the one with 3 cubs who had charged Dr. Castler last night was shot. The cubs escaped into the forest. One bullet, soft nose, steel jacket, 35 caliber struck her in back of the neck, tore the atlas to pieces, went through the spinal cord, medulla, & brain, & out the left side of her face. She crumpled immediately without a sound. The other grizzlies fled to the forest except one female with 2 cubs who kept coming out into the meadow to watch us. Finally she retreated also.

The shot grizzly looked like a large one when alive and also when we picked her up. The

July 15, 1932.

was weighed, however, after skinning with the following results:

| | |
|---|---|
| green skin | 38 3/4 lbs. |
| skinned carcass | |
| total length of carcass from nose to tip of tail | 67 " |
| height of shoulder | 36 1/2 " |
| circumference of neck at base of skull | 26 " |
| length of hind foot | 9 1/4 " |
| length of front foot | 8 1/4 " |
| circumference of front ankle | 9 3/4 " |
| circumference of hind ankle | 10 1/2 " |
| circumference of forearm | 15 1/4 " |
| circumference of hind leg below the knee, i.e. the shank | 15 " |

The stomach was filled with garbage and a little chewed green herbage, unidentified.

Mammoth July 16, 1932

The day spent in roughing out grizzly skeleton. The men at the Mammoth Incinerator said that this morning about 5 AM, 2 grizzlies were at the garbage pile just beyond the furnace. They ran into the Jardiner Canyon when the men got up. Coyotes howling nearby had awakened them. This is the first grizzly they have seen at Mammoth in the 3 seasons they have been here-

July 18, 1932

Report of man at incinerator:
About 8 cans of garbage per day after sorting. 1 sack of oats mixed in. About 1/2 to 3/3 of a can of bones, peelings, etc. comes back each day. Each place is collected once a day.

| | |
|---|---|
| Hotel | 10 - 11:00 AM |
| Lodge | 9:30 AM. |
| Cafeteria + housekeeping | 3:30 PM. |
| Govt. mess ~~about~~ | 7:30 AM. |

There is about half as much garbage this year as last. (13-14 cans last yr.). He feeds a few bears to keep them away from the camps. While I was there a young blacke in good condition with 3 small blacke cubs came to incinerator. The attendant opened his safe & fed them a few shovelfuls. While they were eating 2 large blacks wandered in from different directions. Immediately the mother pushed the cubs up the tree & chased the others about 200 ft. before stopping.

The garbage man suggests a battery of safes, such as he has for bear feeding garbage, to be placed in camp grounds for campers food. He doesn't think that bear-proof

July 18, 1932

garbage cans are necessary but he does think that there are too many bears. Some should be disposed of. Report of Maynard Barrows, Ranger in charge Canyon:

58 blacks & browns have been counted in the Canyon district in the last few days. The annoyances continue at the camp grounds & housekeeping cabins. One brown with split ear tore the boards off the side of one of the housekeeping bungalows twice. This bear was trapped & deported to West Yellowstone this morning. Barrows thinks about half the deports return. He thinks there are too many blacks but not too many grizzlies.

I spent an hour in the public camp ground — from 2 — 3:00 P.M. Every garbage can was tipped over & cleaned of edible food. A yearling black, dog and an adult black were cruising the ground. Every camp & garbage can was visited in different minutes time. The bears were driven from one camp to another. One camp (detained the yearling to get a picture then drove him off when he became

July 18, 1932

a nuisance.

Out of 11 parties in the camp, I questioned 4 about the bears. They all said you have to guard your food & dishes every minute. "We spent half the night chasing them away, & then gave up. They are not dangerous, but they are quite a nuisance, that I might is enough."

George Moss:

The cooks says they do not feed the bears. They shoot them with a sling shot. She affirms that this keeps them away.

A concrete trough containing 3 garbage cans sits outside the back door. It is no longer used. The cooks said that last year when the trough was used, there were so many bears around it all night that the night watchman could not go by. Since then the garbage has been kept in the building with a metal door. The cooks says this has practically done away with the bear depredations.

The two black cubs of the Black Bronze bear killed last Tuesday were in the top of a tree by the kitchen

July 18, 1932.

they apparently sleep there all day when not feeding. At night they go down by the hotel & beg for food. The cooks & men feed them milk, meat & other food. I suggested to them that such practice might bring difficulties next year.

Returning past the hotel, I saw the same brown bear seen July 6th and 14th.

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Pryor's Store.

The garbage is kept in a shed where it is not accessible to bears. It is collected when necessary. Occasionally a bear comes to the back of the store but it is driven away by the employees. This spring a couple of grizzlies broke into the store & tore things up rather badly.

---

Canyon Lodge.

The garbage is also kept indoors. ~~The bear~~ It is in the kitchen. A few bears hang around occasionally but not to any extent.

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Resumé:

Practically all of the garbage

July 18, 1932.

comes from the hotel & lodge. The garbage of hotel, lodge, cafeteria, garage mess, & Pryor Store is never available to the bears. The govt. mess garbage is collected after breakfast each morning. The public camp ground & housekeeping camp garbage cans are available to bears all day & night & are constantly visited by bears

ompson

July 18, 1932.

At the bear show tonight Dr. Bryant, Dr. Bauer, George Crowe, George Bagley, & other rangers & ranger naturalists were present. The bear component was:

3 blacks
1 grizzly with 2 cubs
1 " " 2 "
1 " " 2 "
1 " " 1 "
1 " " 1 yearling
3 yearlings
3 cubs (w/other shot)
12 other adult grizzlies
Total 31 grizzlies
3 blacks

The other adult with 3 cubs did not come in tonight, but it is reported that all 6 cubs followed her out of the arena last night. The 3 orphan cubs circled around the meadow for about 10 minutes before they finally came into the platform to eat.

One brown bear ~~with~~ blind in one eye, (present the night we shot the grizzly) repeatedly drove a young grizzly mother from the table. It threatened everything else, & drove one black away several times. During the

July 18, 1932.

feeding there was a repeated crackling back in the forest. Finally some tree (probably dead) crashed, and most of the grizzlies scattered in every direction. Many of them returned slowly — some of them did not come back.

It is decided to have a bear proof fence put around the seats at the Canyon grizzly show, and to suspend the Bear Show.

A park visitor sitting beside me this evening gave the following statistics on the Penn. game-in 1931.

1200 bears killed in 13 days
205,000 deer " " " " The ratio of does to bucks was found to be 10-1 which is the reason for opening the season on does all over the state.

There were over 700,000 licensed resident hunters @ 2.25 per license
54 hunters were killed during the open season.

Thompson

Canyon



July 19, 1932.

Public camp visited from 6:30 to 7:00 AM.
One car, Chevrolet roadster from Indiana, had top, backs of front seat, & side upholstery torn all to pieces by a bear while at the lodge last night for the lecture. They were utterly disheartened at the situation, & even though they had been warned not to leave food in the car over night, they thought it would be perfectly safe with them. They said, as did everyone else with whom I talked, that they felt that they were entitled to some protection, either insurance, night watchman, or some other means. They protested that they paid an entrance fee which should entitle them to some protection.

Of 22 parties in the camp, I talked to ~~10~~ 12, all of which gave the same reaction. "If the govt. thinks more of its bears than of the tourists why we've had enough." "We've visited Grand Canyon, Mesa Verde, & many other national parks where there are wonderful camp grounds, but we've had enough here, we're moving out." etc. etc.

One man's tent was torn up. He was very angry.

One party of 3 kept one guard on

THOMPSON Canyon 297.

July 19, 1932.

duty all night — also disgruntled.
One party of 3 were roused from their sleep by a bear entering the tent & pulling things out from under their beds. They rented a housekeeping cabin in order to get a night's sleep. One housekeeping cabin was entered by a bear with 2 cubs. She tore the canvas off one side & carried out food supplies by the "arm load", according to observers. The occupants were at the dance. One neighbor ran out in his pyjamas to chase the bear away but she charged him before he was within 30 ft. and chased him past several bungalows. People in the entire neighborhood of the incident were angry & disgruntled. They complained that some protection was needed, and that the public deserved it.

By 8:00 AM, there were 6 adult bears & 1 cub cruising through the public camps & housekeeping cabins.

One man said he had been up since three o'clock, and that bears had been making the rounds on an average of every 10 minutes since that time. Each tent would be visited, the bear yelled at, and then to

the next tent, & so on.

Every garbage can was emptied of food as fast as it was thrown out. One cabin occupant was seen to feed the bear through the window. Another party fed one peanuts in order to get its picture. Neither of these parties had had any difficulty as yet.

At 1:30 P.M. a representative of the housekeeping cabins came in & reported 9 cabins injured since 8:00 P.M. last night. Cabins numbering 31, 65, 77, 45, 69, 135, 130, 82, 114. Report reads, "breaking & entering all nine cabins, tearing canvas & boards." Food was in all cabins except 135. Bears frequenting the area were 3 browns and 1 blacks.

8 cabins were torn the day before yesterday. 39 cabins have been torn this season, and 3 cars belonging to housekeeping guests.

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Tower Falls

The garbage from Tower Falls vicinity is hauled down toward the Yellowstone river between the Cook City Road & the main loop road. The edible parts of it are fed to the bears there, on a table.

# Tower Falls



July 19, 1932.

The rest is burned in a pit. All garbage from Roosevelt & Tower Falls is kept in doors until collected. The public camp and housekeeping cabins are not disturbed to amount to anything according to what reports I could glean.

The garbage collectors said they had 7 blacks & browns yesterday, and a few days ago. No grizzlies have been seen in the 2 yrs. these men have been on the job.

Ben Arnold & Mrs. Arnold think there are too many bears in the park, that they have been preserved & featured at the expense of everything else. That the situation is different from what it was 10 yrs. ago. That the bears & tourists both will have to learn what to do along roads & in camps. Arnold said that 2 yrs. ago he & his men took pick handles and went over to the Roosevelt cabins. Every time they got a chance they clubbed a bear on the head, even knocking them out. He claims that this educated them to go to the woods & stay there. He reports practically no bear troubles at Tower this year so far. I saw 2 large blacks & a brown at the feeding table.

One of these [redacted] also had the tent flap torn off. This party was very angry, & was leaving the park as soon as possible

July 20.

Two 3 yr. old brown bears were trapped & shot today. Tom Stewart, student in parasitology at Harvard, autopsied them. One had no parasites visible in the intestine, stomach, heart, nor lungs. The other one had several round worms in the mid intestine. They were

Both bears were thin but had plenty of food in the intestines & stomach. No complaints came in today from bears.

About 11:00 P.M. I drove through the camp ground & housekeeping cabins. One large brown bear with 2 small cubs (black) was prowling around the camp. It was too dark to follow her. Several people were using flashlights to look around their camps.

July 21, 1932

This morning from 6:30 to 7:15 I cruised the camp. Eleven parties had suffered minor property damage. 3 of them had hung their food up on a rope between 2 trees, & the bears had broken the ropes in every case. 3 food boxes had been torn off fenders; one tent

Canyon

mpson

July 21, 1932

had 2 holes about 15 inches each torn in the sides. 1 car had the runningboard rack torn off, and a bear had collapsed the tent by standing on it; 1 car had the top torn in several places — tears about 8" long; 3 parties, besides those listed already, had kept watch practically all night without sleep.

No one talked aggressively against the park administration but all parties were as upset as anyone is when his property is destroyed.

One sedan had the back window smashed while a couple were sleeping in the car. These people were rather irate when I talked to them.

Another party of 2 cars together had the kitchen box torn off early in the night. The men watched their camp the rest of the night, until 5:AM. They all urged that something be done immediately to improve the situation. Practically everyone suggested a fence around the camp ground, and a reduction of bears. Everyone says he is entitled to some protection. Those who have lost property feel that it should be replaced by the government.

Canyon

ompson

July 21, 1932.

There were 29 cars in the camp last night. Of these, 11 parties suffered the foregoing property damage. Practically everyone in camp had kept watch most of the night. Most of the campers said they could not stand it any longer. Out of every party visited only 1 man said he had slept soundly without mishap and 2 parties who had not suffered, showed little concern. This gives a ratio of 26:3 in favor of ~~[illegible]~~ protection of the camp grounds.

In the housekeeping cabins, 1 tent house had canvass slightly torn by bear attempting to get in.

One party of women with new sport Studebaker roadster — very angry because bear crawled all over it & muddied it inside before they went to the dance.

Most complaints this morning have been centered on a large brown, a large black, & the large brown with 2 little black cubs.

9:30 AM, 2 adult blacks have just left the ~~incinerator~~ camp, & strolled across the meadow to the incinerator. In the incinerator grove, I saw a black bear sleeping at 5:PM last night, stretched out flat, as a colt sleeps.

mp5017

July 21, 1932

11:30 AM One black at incinerator besides the black with 3 cubs. 1 black, 1 brown, & 1 2 yr. old keep at housekeeping & camp ground. All is quiet apparently, but all of these are still missing for food. Total, 5 adults & 3 cubs in immediate vicinity. Just killed 1 large black this morning, & hope to get the brown & a black this afternoon.

July 22, 1932

Canyon

11:30 AM.

Have just arrived from Mammoth. On short tour of camp ground, I find that the situation is practically the same this morning as it was yesterday. There were 27 parties in the camp last night. Most of them were gone by noon, but of those I talked with, all but one had suffered property damage to no sleep. They were able to tell me of about 8 cases of property damage. The large brown with 2 black cubs was reported at the main offender.

At the incinerator there are: 1 brown, 1 black, & the family of 3 cubs. The custodian says he noticed fewer bears this AM.

Grizzlies congregated at the feeding grounds for 3 nights. Last night they were not there (according to Elliotts report).

Thompson Canyon 304

July 22, 1932

In the camp ground + housekeeping quarters there is a pair brown 2 yrs. old & 1 of the 2 small blacks. The daytime crew of camp bears seems to be diminishing. The night crew, I think, is a different set, consisting of older bears + cubs. Expect to get the brown with 2 blk. cubs. Should also get a large black + a large brown.

Lake & Fishing Bridge

Al Elliott, district ranger, says that the bear problem at Lake this summer is a very minor one. A few depredations have occurred in the Fishing Bridge camp. One large brown needs to be killed; several of the younger bears are being trapped and deported. Three were taken away today. They were released by the mud-geysers, which is too near I think.

The Lake Grizzly show was discontinued last Monday night. There have been reports of grizzlies by the camps, but not verified as yet.

says that in 1929 when he used to give his evening lecture by the lake, he used to see grizzlies go right through the camp grounds

July 22, 1932

on their way to the feeding across the river.

This afternoon I saw a small blacks (later trapped) destroy a campers food supply. A small brown was also seen in the camp ground. These were the only bears I saw in the campground. There are about 150 campers, & many dogs, in the camp. They show that they have not been bothered to any extent.

In the housekeeping quarters the following were seen:
1 adult brown with 1 brown & 1 black cub.
1 " black with 2 black cubs.
1 young adult brown (about 3-4 yrs. old)

At the incinerator 6:30 P.M.
1 grizzly wandered in but was chased away by a very large old black. Two other blacks were present — one was only 3 yrs. old.

Elliott seems to know his situation here thoroughly & will remove only such bears as are actually dangerous. The sets of cubs in the housekeeping quarters are very gentle. Even one goes around them & the adults don't seem to care.

A total of 9 adults & 4 cubs have been seen since I came into Lake about 4:00 P.M.

Lakes

306.

Compson

July 22, 1932.

Compton Crook reports 3 sets of cubs on the Lodge side of the river.

Molly Islands.

July 25, 1932

Arrived at the islands about 7:00 P.M. Thirty adult pelicans were at the islands. The young were in the reeds. As nearly as we could count, there were 102 young pelicans. The black primaries were beginning to show. About half the young took to the water. No cormorants were seen. I did not see the terns, altho they may have been present.

One young pelican had hatched within the last 3-4 days. 2 eggs were found but think them deserted.

# West Thumb

npsom

July 24

Same bears found in the ~~camp~~ ground ~~this morning~~ as were ~~found~~ July 11th

1 black cub (alone)
1 shaggy adult ~~at~~ black
1 brown with black cub (deported to South entrance but returned)
1 yearling brown
1 2 year old brown

In housekeeping cabins
1 black with 2 cubs, blk. & brown
2 adult browns,
all eating out of garbage cans.
people feeding cubs, people enforcing whole crowd of bears, no fear shown by guests.

# West Thumb

July 26.

Garbage dump is just back of govt. press, close to public camp ground.
11:00 AM dump wagon arrives. 8 bears & 3 cubs present. They are:
1 young blacks with 1 blk & 1 brown cub
1 old very large blacks lacerated in yesterdays fight
2 very large browns
3 medium blacks
1 medium brown with 1 blk cub
At the same time, around the

July 26, 1932

housekeeping cabins, are the following:
1 brown with 1 blk cub
1 fat, 3 yr old light brown (tore Buick cushion July 11)
2 lean young browns.

People in the cabins were feeding bears all the time I was present. A few days ago, a bear climbed a tree over a tent-cabin, jumped through the roof (tearing it badly) and apparently lit on the bed. The side flaps were also badly torn. There was no food nor occupant in the cabin. The bear is a 4 yr. old blk. one with large white spot on breast. The cabin manager says people feed bears from the doors all day. He showed me 4 cabin doors scratched & ripped by bears.

The cafeteria & housekeeping cabin garbage is picked up about 10 AM each morning & hauled to the dump ground. Hamilton's store handle their own garbage. Their cans sit at the back door & are visited hourly by bears. The public camp ground has a garbage collection every other day.

John Jay, Shasta ranger in charge says that 34 different bears have been seen in the immediate region in the last few days. I have seen 13 this morning.

Thompson

# Hot Thumb



July 26, 1932.

In the public camp: 11:50 AM: a couple with 2 children, teen age, are feeding the mother with 1 blk & 1 brown cub, and are enticing it upon the table in order to get pictures. The children are ordered & hooked about by the mother in order to make them stand beside the bears which are on the table. The father is warning them not to get too close, & the mother is telling them to get ~~closer~~ clear because there is no danger. They had fed the bears fish a few minutes before. The picture is finally taken.

Dr. Daffler came from Old Faithful to Thumb with Dr. Bumpass. They saw 17 blacks bears & cubs between Faithful & Thumb. As Dr Daffler & I drove back to Mammoth we saw about 8 more along the road, exclusive of those in the settlements.

1929 July 10 first piggy at QF

# Old Faithful



July 27, 1932

6:50 P.M. 17 blacks + browns are counted between the dormitory & the feeding grounds, inclusive of those at the ground. The grizzlies are still in the timber. Most of these blacks are very large — there are no cubs among them. Besides these, we have seen 1 yearling, 1 blacks with 2 cubs in the camp area; and along the road, 1 blacks with 2 yearling cubs, + 1 blk with 1 cub. This makes a total of at least 26 black bears seen in the vicinity this afternoon. There are others which I have seen on other occasions.

Grizzlies seen at the platform:

| | | |
|---|---|---|
| 1 adult | with | 3 cubs |
| 1 " | " | 1 light faced cub |
| 1 " | " | 1 yearling |
| 1 " | " | 2 cubs |
| 1 " | " | 2 cubs |
| | | 2 2yr. olds |

about 14 other adult grizzlies

During the lecture the mother with the light cub repeatedly ran up to the left of the audience to protect her cub. At one time 6 grizzlies chased each other off to the left. The blacks remained at the station in considerable numbers & fought for their food. When chased they climbed over the barbed wire fence without hesitating. The situation

Thompson

July 27, 1932

does not look safe to me. A letter fence or wire entanglement should be put in for the present, or if this is to be the permanent station then a high concrete ramp should be put around 3 sides of the audience.

This afternoon Ralph LaMone & I tried ammonia in a pyrene gun on about 12 bears & cubs. The bears were frightened in every case & ran away, but they paid no attention to the ammonia, & even returned to the car in a few minutes. The experiment appears to be a total failure. We intend to try it again in the morning.

From Old Faithful
to Thumb to Mammoth.

July 28, 1932

The experiment with the Pyrene gun & ammonia. Ten more bears were sprayed, making a total of 22. 5 of them were sprayed only once. 4 of them were sprayed 3 times each. 1 of them was sprayed twice. In each instance they were frightened and ran a short distance away. In a few cases they shook their heads and appeared to smell

Thompson

July 28, 1932

some discomfort. But those which were sprayed more than once returned to the car within a few minutes, which event occasioned the second & even the third spraying. The experiment still seems to be a failure.

In covering this portion of the loop road we encountered 23 bears. Their distribution was as follows:

Thumb, 6 adults, 2 cubs
Lake, 3 adults
Fishing Bridge, 5 adults, 2 cubs
Canyon 5 adults.

At Fishing Bridge the bear situation has suddenly become aggravated! There have been so many raids that the campers are in an uproar. A petition, signed by more than 40 of the permanent campers, requesting that bears be shot, or else the camp ground fenced, was presented to the superintendent. Last night some camper shot a bear in the camp ground. The camper ~~~~ who did the shooting has not been identified. The wounded bear, a very large

Old Faithful to Mammoth

313.

Thompson

July 28, 1932.

old black was dispatched this morning by George Walker, Ranger.

A grizzly bear chased a fisherman up a tree two days ago. The man tried to descend & was chased up twice more. Finally he escaped, ran to the road, and caught a ride into camp.

A party of employees near Fishing Bridge were along the river a few nights ago having a picnic. Four grizzlies came close to them & growled, frightening them away.

As Sam & I drove through Hayden Valley, about 4:30 PM we saw a herd of more than 200 elk about 1 mile west of the road in the vicinity of Alum Creek.

34 white pelicans were seen along the river.

At Canyon, Maynard Barrow reported 9 skunks killed so far and the 1 grizzly. The camp bears have entirely ceased. 8 cubs are left orphans.

rompson

July 29, 1932

Today George Baggley & I drove to Lake. We used Carbon disulphide in a Pyrene gun on one bear & her cubs. At first they showed no effects, but in about half a minute they began running wildly through the woods, foaming and shaking their heads. Apparently it hurt their eyes. In a few minutes they showed no ill affects & went about their foraging as though nothing had happened.

Four bears have been killed at Fishing Bridge. It is decided to kill about 3 or 4 more.

Thumb, 1 killed, 3 to be killed
O.F. 1 " , 3-5 more to be killed
Canyon, 9 " , 2-3 " " " "

The feeding of 100-200 lbs. of rolled oats to the bears at Canyon is to be discontinued in order to see what effect such measure has. Martindale's request for oats to supplement garbage at OF is to be denied.

Garbage supply daily:

OF, 6-8 cans
WT, 2-3
FB, 4-5
C, 9-11
I.F., 2-3 cans
Mam. 5-6

All available garbage is to be fed to bears except at Mammoth.

Thompson

July 30, 1932

Conference with Baggley, Spiller, & La Rose.

It is decided that La Rose shall be in charge of bear control hereafter. Any control measures are to be kept from the public as much as possible.

After much discussion pro & con concerning fences, & other mechanical devices to protect property, the following was decided:

1. The problem is to be treated as a local problem. No lengthy report is to be sent the director. When control measures are necessary, bears shall be quietly disposed of and reported later.
2. La Rose will carry on experiments with bear repellants, both at Canyon with a Pyrene gun for several days, and by spraying garbage cans at Thumb with creosote & chloride of lime.
3. Next year, perhaps, concrete food containers with iron doors may be erected by each table in the Thumb camp ground and an attempt made to prohibit all feeding of bears there. It shall be made a foodless camp, so far as bears are concerned.

Benson thinks there may be 8–10 pa
of Sandhill Cranes in the region
Several hundred go through in the
but I think these are Little Brown

After going to bed about 500 mo
ducks flew over. Benson sa
that they do a great deal of wick
as soon as the molting season
is over, which it now is. He th
it is a manoever to teach th
young to fly. But I saw mo
young ones much too small t
fly.

Thompson

# Malheur Lake
## Oregon



Aug. 3 1932

Arrived at Narrows 6:00 PM. By the bridge were:

| | |
|---|---|
| Wilson Phalarope | 100 + |
| Coots & young | 150 |
| Mallard & young | 2 families |
| Killdeer | 30 |
| Avocets | 6 |
| Yellow-headed Blackbirds | 100 + |
| Egret | 1 |

Driving to Bensons I saw hundreds of young Sage Thrashers & Kingbirds as well as Brewer Blackbirds. Many Black Crowned Nightherons (about 30) have flown toward the lake since sunset. 1 pair of Sandhill Cranes heard near Bensons. About 200 ~~ducks~~ ducks fly toward lake about 9:PM. unidentified but probably Mallards & Gadwalls. Nighthawks & Burrowing Owls abundant.

In the spring at Bensons have seen Stilts, Yellow-legs, & some kind of sandpiper.

Benson has pictures of Whistling Swans here in migration. He has often seen the yellow patch on their bill.

Aug. 4, 1932.

Another pair of Sandhill Cranes heard calling about 7:AM. We drove to east end of lake and

Thompson

Aug 4, 1937.

saw more than a thousand Canada Geese. Their molting is over too. About 300 avocets and 100 Egrets also seen.

Benson says that a trial was held last year to get a clear federal title to the refuge. Now that that is done, it is planned to buy up the private holdings and let the water come back as it originally was. There should be about 60,000 acres flooded although Benson thinks that only about $\frac{1}{3}$ of that is now under water. The rest is in cattle pastures & grain.

About 20 white pelicans were seen in the distance. Benson thinks there are not more than 100 here this year. The islands where they have nested are on dry land now, so it is not probable that they nested this year. The lake was completely dry last year; consequently no fish this year. If the pelicans are present they are down the Malheur River. Benson says there were never more than 250 since he has been here. His address is Voltage, Malheur Co. Oregon

Thompson

Warner Lakes 318.

Aug 4, 1932.

All the lakes north of Hart Lake are dry. Hart & Crump are both low. Crump is full of Jule islands. Both were dry last year.

A farmer on Crump Lake said this evening that pelicans used to be here by the thousands; that in the last few days he had seen several hundred on the ponds, where chub stayed last year in potholes which did not go dry. Mr. Neibling of Adel said Dr. Prill of Scio was here again this summer as he has done for 8-10 years. But he did not stay. He reported the pelican & gull colonies destroyed by coyotes. He was here sometime in May.

At dinner last Crump Lake I saw 18 Western Grebes. Some of them may have been immature. Hundreds of young coots were in sight too.

Neibling also reports a few pairs of Sandhill Cranes there.

The water of these lakes is not taken for irrigation. They have gone dry because of drought. Neibling says this used to be a great hunting country.

Thompson

Warner Lakes 319.

Aug. 5, 1932.

Today I drove over to Foss Morgans at Crump Lake to look for Pelicans. They were scattered singly and in groups over the lake. From 8 to 10 AM the lake was watched with binoculars. About 200 White Pelicans were counted, about 500 Canada Geese, many ducks which I could not get near enough to identify 2 pairs of Sandhill Cranes, and several Black-crowned Night Herons & Great Blues.

The lake is very shallow everywhere — tules & marsh plants grow up almost & islands throughout. Heart Lake is just an overflow of Crump & is likewise very shallow. The geese were mostly on Heart & I drove around the east side of it. There is one tule island in Heart Lake, but the Pelicans & gulls do not nest there. They nest near the south end of Crump, according to Weibe.

Morgan said he had trapped 15 ~~mile~~ mink around the lakes about 5 years ago. 9 of the pelts were 22 inches long & 6 of them were 24, all beautifully matched. He has also seen weasels & otter. Everyone in the region says coyotes are increasing alarmingly & that the govt. trappers are no good.

Thompson

# Goose Lake

320.

Aug 5 1932

Goose Lake was not visited, as I had intended to do, because various people in Lawerence whom I interviewed said that it was almost gone. Last year it was dry. This year there is some water in it, but no birds nest there. It used to be a great place for nesting geese & ducks and furnished wonderful hunting. The land over most of its lake bed has been reclaimed for farming.

# Klamath Lake

Aug. 6 1932.

Lower Klamath, the once great nesting place of the pelican is dry and has been so for 15 years, according to local report. I counted 100 white pelicans on Link River by the bridge about dusk last night. Fish were jumping all over the water's surface. & Farallon Cormorants were feeding there too, as well as a number of ducks too far down to identify.

This morning I drove to the north end of Klamath Lake and also to the dam in Link River behind the town.

The Warden in charge at Clear Lake is
H. M. Worcester, Merrill, Oregon

The river below the town is filled with Pillows. About 25 Black-crowned Night Herons, several great blue herons, about 100 pelicans, ~~and~~ a few cormorants & ducks were seen. One family of 4 little yellowish ducks had just hatched. They may have been Redheads but the female was not in sight.

Going up the lake about 500-600 white pelicans were seen with binoculars scattered all over the lake. About 2000 Western Grebes were along the shore from one end of the lake to the other. Farallon Cormorants & Calif. Gulls were present in limited numbers.

Everyone in Klamath Falls whom I interviewed said there were more pelicans on the lake this year than ever before. They estimated "many thousands."

Mr. Barnes, of the Oregon game commission, was interviewed. He said that thousands of pelicans nest in Clear Lake, Calif.; that he thinks all the Lower Klamath pelicans nest there now. He advised me not to go to Clear Lake because everything was gone now.

# Reference Eagle Lake

August 29, 1932

Have just had a short talk with Prof. Harding of the irrigation Dept. He was at Eagle Lake for 2 days in the latter part of June this summer. He reported seeing only about 25-30 white pelicans on the old nesting ground which is now connected with the mainland. He saw no nests nor young anywhere around the lake.

It is planned to continue draining the lake until its area is approximately 3000 acres, in order to cut down the loss of water due to evaporation. Both the incoming water supply & the lake water are being used for irrigation. He sees no future for pelican nesting colonies at Eagle Lake.

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# Reference Idaho

Sept. 5, 1932

On July 31, 1932 I saw Bill Rush in Yellowstone. He had just returned from Idaho & gave the following account.

Selway National Forest, Idaho, about 8000 deer, and 7000-8000 elk.

Clear Water, N.F. Idaho, about 2000 elk.

Mt. goats also abundant.

Thompson

Reference Minidoka
Reservation, Idaho.

Sept. 10, 1932.

On August 2, 1932, I had a conference with McGee, U.S. Game Protector for Idaho. He was at American Falls, Idaho as I came through. The following notes were made on a scratch pad & are herewith incorporated.

McGee estimates 1500 White Pelicans along Snake River from mouth of Weiser River to American Falls. None known to nest anywhere in the state. At Minidoka, no pelicans have nested for years. There are Forsters & Black Terns there, Mallards, Green- and Blue-winged teal, and some pintails and scaups, all nesting except the pelicans. Herons also nest there.

McGee has killed about 2800 Black-crowned Night Herons & Great Blue Herons in the last 6 weeks.

Pelicans collect on Lake Lowell each fall during migration — up to 200, but never many more, (Canyon Co.)

McGee knows of no caribou in Idaho now, although he is convinced they used to be there.

White Pelican
British Columbia

Oct. 25, 1932.

Interview with Mr. J. T. McCabe:
Swan Lake, 20 miles west of Quesnel, a few pairs of pelicans have always been reported.
Pelican Lake, beside Anahim L., always a few breeding reported. None seen there last of April 1932; lake still frozen over.
Anahim Lake, first arrivals Apr. 22, 1932. Snow everywhere at this time. But Bowser, resident at Anahim for many years, says no young on ~~the~~ lake for 11 yrs. June 10-14, 1932 1-26 on Anahim. Seven had hatched on the lakes. Reports of scattered pairs in 6 lakes in Anahim Lake region.
Charlotte Lake, apparently none found.
In the Entiako Lakes region where McCabe is going next year, there are reports of pelicans in numbers, but no definite data. This sounds like ideal pelican country; semi arid, small timber, shallow lakes.
None along mountainous coast.
Tsondeston Lake, near Charlotte Lake, a resident summer population of over 20. None known breeding.

Yellowstone Pelican Banding Returns

| | |
|---|---|
| Oct. 17, 1932 | Colorado River near Cibola Ariz. |
| Nov. 9, 1932 | 20 mi. from Heberland, Imperial Valley, Calif. |
| Nov. 11, 1932 | Laguna Dam, Colo. R., Calif. |
| Nov. 19, 1932 | Calipatria, Calif. |

~~H W J~~

French Hill Farm
Yorktown Heights, New York

Kitchin, E. A., Feb. 1934. Distributional Check-list of the Birds of the State of Wash., Northwest Fauna Series, No. 1., Pac. Northwest Bird & Mam. Soc., Seattle, Wash., 50¢. (Old P. O. bldg. Olympia)

Report, March 1933, by CC Olson & Lamar Olson on elk field investigations. Bell Terminal Bldg. (foot of Bell St.) ask for Overdon.

Report on the Elk Hunting Season in the Olympic Mts., by Leo. K. Couch & Foster Steele, Oct. 31, 1933. (Ask Bryant for this)

See Judge Riemen? in Tacoma for road i

Probably ~~Monotropa~~
Arctostaphylos platyphylla

# B. H. Thompson
## 1929-1957

## Journal

1933 Arizona: Grand Canyon N. P.
Petrified Forest N. M.
Canyon de Chelly N. M.
Colorado: Mesa Verde N. P.
Colorado: Rocky Mountain N. P.
Wyoming: Yellowstone N.P.
Utah: San Rafael region

## Kaibab Deer Totals

| | | |
|---|---|---|
| 3/4/33 | Slide Point to Table Rock | 837 |
| | 7 dead | |
| 3/5/33 | White Pockets area | 892 |
| | 2 dead | |
| 3/6/33 | Jumpup Point & north | 1006 |
| 3/7/33 | Jumpup to Little Springs, and the region east of Jumpup Canyon to the point east of Jumpup Point. | 888 |
| 3/8/33 | Jumpup to Sowats Camp | 36 |
| 3/9/33 | Sowats & northwest to Sowats Canyon & Sowats Point | 421 |
| 3/10/33 | Sowats to Little Saddle & west to Kanab Creek, also includes Sand Rocks down in Kanab, Jumpup, & Sowats Creeks | 419 |
| 3/14/33 | Kane & vicinity south | 173 |
| 3/15/33 | Moved to South Canyon | 31 |
| 3/16/33 | Saddle Canyon & vicinity north to South Canyon | 105 |
| | Total no. of deer seen on the trip. | 4798 |

Grand Canyon Lodge at Lee's Ferry Bridge, Arizona. Feb. 28, 1933.

Today Chief Ranger Brooks and I drove from the lodge to Bunches, a distance of 26 miles into Houserock Valley. The snow is usually gone from valley floor and lower winter range at this time, but today snow lay over the entire valley about 6 inches deep, melting down into snow patches at certain places. Roads almost impassable.

At the present buffalo herd 2 bulls and 8 cows have killed. Two of the cows had fetuses. 95 buffalo are now in the herd. There is water at the "Pool", a spring at the base of Vermillion Cliff opposite Bunches store. Water is also found in the valley at Cain, Houserock and at the "Tepee" which are just north of the corner of Vermillion Cliff. The Grand Canyon Cattle Co. still holds water rights in the valley. There is very little dry grass on valley floor & a small type of arid shrub. Range in very poor condition. Some cattle, horses, and sheep & goats winter in the valley.

Mrs. Bunch told us how she raises the fawns which are caught

Grand Canyon Lodge

Feb. 28, 1933.

on the Kaibab and turned over to local residents to raise and sell.

1. Take sedan and goats to place of capture.
2. ~~Place~~ Hold goats head & allow fawn to suck.
3. Transport goat & fawn back.
4. Keep fawns in pen.
5. Allow fawns to suck either goats or four morning and evening and drink all they want.
6. Feed each fawn bottle of milk (cold & undiluted) at noon. Bottle looks like Liquot bottle.
7. If fawns scour, feed them raw egg beaten in milk.
8. Wean them at about 3 months, or when spots begin to disappear.

Note: cow will take to them & to her own calf, but goats' heads must be tied up apart at all times or they will bite the fawn's tail off, or bite them anywhere possible.

Kaibab Forest Supervisor Walter G. Mann and party failed to arrive today.

Reference Yellowstone Park

Feb. 28, 1933.

Chief Ranger Brooks told me at Grand Canyon Lodge this evening the following account:

In winter of 1918-19 the first trappers (Jones & another man from Cody) trapped an area adjacent to south boundary of Yellowstone (about 12 miles south by 20 west, covering Thorofare district. Brooks visited their camp. Their furs were on poles outside of tent. About 50-60 martin skins, 2 beautiful cross fox, and several coyote skins were there. Brooks bought the fox skins for $150. When his wife took them to furrier in Denver she was offered $800. Each man that winter cleared around three to four thousand dollars.

Charlie Fessler was trapping in the region south of the park in those years. He started with practically no capital.

Brooks has also informed me that he planted fish in the lakes along the Axtell Freight Road both inside & outside of the park.

Cain, near South Canyon

March 2, 1933.

This morning I talked with Bill Crosby, an old cattleman and deer guide on the Kaibab. He has been in the region many years. The following is the gist of the conversation:

Grizzly Bear: An Indian killed ~~one~~ two in South Canyon about 75-100 years ago. This is the only one known to visit the region.

Black Bear: Three blacks have been known to wander into the plateau in Indian & White annals.

Timber Wolf: A few were there when white men first came.

Mule Deer: Probably as many deer in the forest in Indian times as are here this season.

As we drove down from Jacobs Lake, about 4 miles north of the post, I saw a Goshawk fly through under the pines. The ground is covered with snow on the plateau, on an average of 1 foot deep — 3 feet deep in some places + 2 feet deep at the north rim near the hotel. We saw no other life in the forest.

A Prairie Falcon? was seen in the early morning just north of Cain.

West Kaibab Winter Deer Range

March 4, 1933

Deer counted by all parties

Total 837
recent dead 7

By parties:

Willow Canyon 172
Table Rock 353
West of Slide 312

Our trip to Willow Canyon west, south to back to Slide disclosed deer always in small bands hidden in juniper pockets protected from a cold north wind. Bands ranged in numbers as follows: 14, 9, 6, 13, 27, 9, 9, 29, 15, 21, 10, 10.

The range shows improvement everywhere, as compared to its condition 2 years ago. It gets progressively worse toward the points on Snake Gulch. Cowania shoots range up to 1 foot long, especially on the lower browsed stubs. But out toward the points these sprouts are browsed almost to nothing. Same is true of Ephedra, much of which has been actually killed. Sage shows the most marked recovery. It is literally covered with new brush shoots

Forsaleia has been heavily browsed, but is abundant. Not much ~~&~~ grass anywhere.

The deer were in excellent condition — only one laggard seen. Several (perhaps 6–8) bucks still carried antlers. Many fresh dropped antlers were scattered over the range. Six old skeletons were seen. Many counted & estimated them to be about $\frac{1}{4}$ of the total no. seen.

Other things seen:

3 coyote tracks
4 bald eagle, adults
Many Piñon jays, bluebirds, and gnatcatchers.

Members of the party:
Walter G. Marsh, supervisor
Bob Parker, district ranger
Dick Julander, range specialist
Chas Murray, Ariz. game warden
Willard McDonnell, Forest Service
Jim Brookes, Chief Ranger, Grand Canyon
B. H. T. Wild Life Division, Park Service.

West Kaibab March 5, 1933.

From Slide to White Pockets Area.

The range seen today appeared, in general, to be more heavily overgrazed that much of that seen yesterday. Everywhere, the sage showed marked improvement, but most of the Eurotia new shoots were severely browsed. That is, where it was untouched it would range from 6"-12" new shoots, but where browsed most shoots were 2"-4" long. The range, while showing some improvement, still shows too heavy utilization. Julander, the range specialist, says that cattle browse Ephedra more than deer do, but that Eurotia is choice forage for both. Most of the grass in the region is Stipa. Some Atriplex canescens is on the range & is choice cattle food. It stops heavy browsing. Green grass is just appearing. Snow a foot deep is on all shaded slopes, but sunny slopes are clear.

Other items seen:

6 bald eagles

10 ravens

titmice, bluebirds, robins, pinon jays.

1 coyote

# West Kaibab Deer Range

March 6, 1933.

Today we rode over the jumpup pasture, from the cabin, west to the Point, then north along the points on Kanab Creek & then diagonally back to Camp. The whole range is very poor, heavily browsed, much of Cowania killed, what remains is scarce and heavily browsed. Juniper & sage constitute the most of it. There appears to be no recovery anywhere. This is the worst we've seen in the three days ride.

2 Jack Rabbits seen
2 Bald Eagles (immature, or else Golden Eagles).

Jumpup to Little Springs. March 7, 1933

The range seen today showed very little recovery, as a whole and out on many of the points it appeared to show no recovery. Everywhere the plant composition is the same, except that perhaps more Cowania was around Slide. Four recently dead deer were seen by us & 1 by the other parties. Coyote tracks were all around the carcasses, and perhaps 10 other tracks were seen. Last night

several coyotes howled near camp. They seem to be more numerous in this section than in those covered previously.

The terrain covered today is more open over a large part than most of that we have covered, yet we found 326 deer in the juniper hollows. Some bands numbered 50. Singles are very rare. One single seen today had a broken leg. Whether the others will not tolerate it or whether it is simply unable to keep up, we could not say.

Iblahader examined the stomach contents of one of the kills and reported (estimated)

87% Cowania
3% weeds & unidentified
5% grass
2% juniper
1% pitan
2% sage.

Numerous ravens, flocks of Piñon jays, 2 towhees, juncos, 2 Crested Jays, 1 jack rabbit, were seen.

Tomorrow we leave for Towats Point to be in that region 2 days. Most of the west side rang

has been covered in the 4 days riding thus far, and the deer seem to be mostly west of the Slide-Jump-up road; from there to the breaks or points along Snake Gulch & Kanab Creeks. That means that perhaps a little over half of the range west of the bare hills is used by the deer during the critical part of winter, and it is this critical portion of the range which does not show sufficient improvement, it seems to me.

There has been some discussion of the percentage of the deer we see in our counts. In some restricted sections, such as the points, we probably see from half to all of those present, but in the broken country all back of the points, it seems to me that we do not see more than from $\frac{1}{5}$ to $\frac{1}{10}$ of the deer present. The counts are not taken automatically by cross section, but we go out to hunt for deer, consequently we do not get a true cross section. This makes the estimate problematical.

Jump-up to Sowats Camp, Mar. 8, 1933.

Today we rode up the canyon from the waterhole at Jump-up. 29 deer were seen enroute and 7 near Sowats Camp, making a total of 36 for the day. This was no croop section of the range because we were down in the canyon most of the way, and as large a party makes a deer count impossible.

Coyotes howled last night, once and again this morning about 7:00 AM.

Sowats Canyon to Sowats Point

Mar. 9, 1933.

The range in the Sowats region has been the most heavily defouded of any of the winter range. This took place when the whole range suffered. Since that time, the deer have been fewer than in the Jump-up—Slide area. But this is still the worst region. Shantz figured that 80% of the range productivity was destroyed. Certainly, a look at the browse of the area would confirm this statement. I counted the live and dead Cowania bushes in several of the browsed areas

this afternoon, (several hundred plants counted) and found about 2 dead to every one alive, and the live plants ~~were~~ had a great percentage of dead branches on them. The Cowania which is alive and recovering shows close browsing. Perhaps 75% of the new growth has been utilized. This is considered by Julander to be approximately normal utilization. But it should be remembered that this is 75% utilization of the remaining 20% of the normal range. Hence, in round figures, the range should support at present only about $\frac{1}{5}$ of the normal deer population. By "normal utilization" I think Julander means that utilization which will allow of range recovery. However it seems to me that "normal" utilization should apply to sustained yield of an undamaged range, and that utilization of the present reduced range should be enough less than "normal" to allow of recovery & range improvement.

The Soapals region is reported to be the cougar area of the

forest. Twenty-five cougars are estimated as being in the forest. Julander saw one cougar track last year and one track was seen the year previous. In 1927-28, Jack Butler, local lion hunter, killed 49 cougars in the Sowats Canyon region. I cannot consider the estimate of 25 as anything more than a guess. But everyone has faith in Butler's estimate. The years Butler took the lions from Sowats Canyon area it is reported that he made $9000. one winter from his hunting parties. Last summer Butler & Brooks hunted cougars in the Powell Saddle area. They "turned up 2 or 3 fresh tracks" but the heat caused the dogs to play out before the cougar could be tracked. Certainly, cougars are not a controlling factor at present.

Last year Butler trapped about 250 coyotes on the forest. This is reported to have considerably controlled their numbers. Several coyote tracks were seen today, but it was impossible to keep a count of them. Butler uses decayed fish heads & entrails as Coyote bait.

Other Observations for the day:
2 recently dead deer
8 dead cows
1 live jackrabbit.

Cowats Camp to Little Saddle

March 10, 1933.

No change in range was noted today except that more junipers & less Coniania grow in this area. Hence it was more difficult to count deer. I am sure that we saw less than 20% of the deer today. We would often see fresh deer tracks showing where the deer had bounded away from us, yet we caught no sight of the animals themselves. Everywhere along the canyons to the west, the high points & ridges are browsed the most severely. The so-called "points" are no inconsiderable part of the winter range.

Dropping down on to the Sandrocks after the day's hunt, we saw 13 deer on this area, in one band. It soon grew too dark to see others. We frequently heard coyotes howl from the Sandrocks. Cattle are more numerous here. Still, only about

1800 head of local cattle roam the forest as a whole, and they are not considered as a heavy factor in range destruction, owing to their numbers.

March 11-12 were spent enroute to and in Kanab.
March 13 was spent in moving the horses from Ryan to Kane.

March 14, 1933. Ride in Cain Kane region.
Kane is about as far north as the East Side Winter Range extends. Deer are not abundant here. Many tracks were seen, & the consensus of opinion was that we saw only a small percentage of the deer in the region. 173 deer seen for the day. Cowania is scarce, but none of the range shows utilization to amount to anything during the last 9 years. One enclosure 5 miles south of Cain Kane showed hardly any perceptible improvement over the region outside the fence. Juniper & pinon dense. One Coyote seen.

Cain

Camp to South Canyon

March 15, 1933.

No count today because we moved to South Canyon. 31 deer seen by Julander & Brooks enroute. In the South Canyon area, Cowania sage & juniper are in excellent condition. In fact, there is more range than deer. Many of the junipers which had been defoliated in 1924 are covering these bare branches again with foliage. I have never seen this before and it is generally thought that the "browse" would not replace itself. Deer sign everywhere. The snow has been off the ground scarcely two weeks. Hence these tracks are all recent.

Saddle Canyon

Mar. 16, 1933.

Days deer total 105. The range covered today is so densely overgrown with juniper & pinyon that it was impossible to make a count. Fresh deer tracks were seen constantly, but we rarely saw the deer themselves. Range in excellent condition. Cougar, fox

and coyote tracks seen today. The cougar tracks was near the junction of Saddle Canyon & Marble Canyon.

Now that the count is finished, we have decided on a 35% count on the west side, estimating a total of 12,900 deer there and a 10% count on the east side, estimating 3,100 deer here. The grand total, 16,000 deer. We have agreed that it would be best to keep the east side closed to hunting in order to build up the herd, but that the west side herd should certainly not be increased at present. / See Mann's report and my report to the Director. /

15 Miles east of Barstow

Two desert tortoises Apr. 23, 1933.
each about 5 inches long were
seen within half a mile of each
other. They were crossing the
road. About a mile further east
a side-winder was crossing the
road. This was about 10:00 AM.
In contrast to other snakes which
I have seen on pavements, it
could move as fast on the
asphalt pavement as on the
ground. Its locomotion appears
like a rapid writhing obliquely
forward, its body always
kept in "S" loops, & never out
longitudinally. Its head was
kept up and it rattled con-
tinuously. The horns were quite
conspicuous.

# Zion Natl. Park

Interview with Harold Russell

April 29, 1933.

Hopkins who grazes sheep in n.w. corner of park said that a cougar which they saw, killed 14 sheep in one night in forepart of August, and on other nights other kills — 7 in one night.

Deer seem to be increasing. About 18 died from some unknown cause last summer — thought to be from a disease caused by eating too many

Probably no coyotes in the canyon, but are on rim.

Bobcats getting fewer. Much trapping around park — have caught bobcats, foxes & ringtails.

Raccoons used to be abundant in Zion before it was a park, but now have gone almost. Yes coon tracks seen in last few years. Coons plentiful in Great West Canyon.

Mt. Sheep. One female caught east of park & brought into park & fed all winter. Released this spring & not returned. Nothing known about those behind Bridge Mt.

Zion.

Apr. 29, 1933

Supt. Patraw says that deer are increasing so rapidly that he is not worried about the numbers which are shot around Springdale & Rockville. Tracks were seen throughout the valley. Deer are tame enough that they are often seen about the houses & lawns. This is much more noticeable than when we were here in 1931. We saw deer today several times while driving up the valley. There appears to be a grazing or browsing line on all the pinnacles & cliffs in the river bed. Mr. Brooks suggests this is due to high water. I did not get to examine it because of the constant & heavy rain. Supt. Patraw says that does far exceed bucks — perhaps 14 to 1. This needs investigation.

and extends well into the monument,

Fredonia to Toroweap Valley

May 2, 1933.

Today it snowed intermittently for about 2 hours while we were driving toward Toroweap. An exceedingly cold wind blew all day and showers (probably snow) fell all around us. U.S.F.S. Poison signs well posted.

The range all the way to the Toroweap Valley has been so overgrazed mostly by sheep, that it is almost barren. Only such shrubs as sagebrush & chrysothamnus remain. The grass & herbs are almost entirely gone. Juniper has been browsed as high as stock could reach & all young stuff is killed outright. Erosion, both sheet & gulley, is very noticeable. An area perhaps 15 miles long shows old fire scars and the junipers in it are mostly dead. This is about 10 miles south of the monument, toward the west rim, and as near as I could tell, reaches to the south boundary of the monument. The area covered today is Public Domain, & the main winter range for local stock — perhaps 60,000 head of sheep. It is utterly destitute.

W. A. Kent was first in the region around 1914.

Toroweap or Tuweep Valley.

May 2, 1933.

Interview with N. A. Kent.

← The Kents came into the valley to homestead about 5 yrs. ago. They are cattle people. The valley above N. A. Kent's homestead is mostly homesteaded. Gardening & cattle raising supply a living. The places are neat, clean, & fairly well improved. The valley is fertile & produces excellent potatoes, beans, sorghum, corn, & gardening products. It is of course overgrazed. Fences, houses & barns are up. Water is scarce.

The stock driveway appears to serve no purpose. It may have been put over by a sheepman to spite the cattlemen — at least, such is the view taken here.

The area as wide as Mt. Trumbull Nat. Forest & extending from the Forest south to the Colo. R. is a State game preserve. Has been so since 1930. Kent procured the step. He saw a local inhabitant kill 30 deer at one time & feed them to the chickens. Deer are not as abundant in the Trumbulls as on the Kaibab but he reports them common. Last fall he saw a band

On our trip of May 4, I did not find this to be the case. Although deer browse is excellent toward the southern end of the Trumbulls.

of about 35 deer on the south side of Mt. Trumbull. Forage is about the same type as on the Kaibab, but has entirely recovered from previous years of overgrazing & browsing. The deer winter down along the Colorado & not in Juniper Valley. Very few deer are east of Juniper due to heavy sheep grazing. Antelope were abundant in the valley 20 yrs. ago. They are all gone now. A band of six antelope were on the west side of Mt. Trumbull until about 5 yrs. ago. Since then they have not been seen.

Mt. Sheep are common along the cliffs east of Juniper. A week ago two sheep were seen close to Kent's homestead. He says they are found east along the cliff of the Colo. and around Toroweap point.

Coyotes are common. Yesterday morning a calf was dropped close to the east cliffs. When Kent arrived the cow was standing over it and two coyotes were within 100 yds. lying down watching. Another calf recently born was eaten by coyotes. Coyotes are trapped through the winter.

Band Tailed Pigeons are reported common.

They are not as abundant as formerly when the Kents first came. At that time they used to see them almost daily.

Trappers also report getting gray foxes & kit foxes, badgers a few, bobcats a few. Skunks, apparently the little spotted, are numerous.

Cougars used to be bothersome in Mt. Trumbull, but have been so diminished that they are no longer hunted.

Prairie dogs not found south of the river. Jack Rabbits & Cottontails were very abundant until about 3 yrs. ago when they seemed to disappear almost at once. However, A Mr. White, 7 miles north of here reports Jack Rabbits as damaging garden crops.

Mourning Doves plentiful. We saw a flock of 5 this afternoon by Father Kent's place. Gambel's quail reported common here at times.

The Bio. Survey has not been poisoning in the valley for 4-5 yrs., although they are still operating in the territory one crossed before getting to the valley.

My first impression is that this region is lost to game. The valley is fertile and will be cultivated. The range around it is so denuded that I don't think it suitable for antelope in its present condition. It does not seem that anything much can be done for wildlife in the monument so long as the grazing is continued. The Mt Sheep & Sleep of the canyon are of course excepted. They will probably benefit as well as what other life is in the Canyon. And it may be possible to re-introduce antelope in the valley portion between (south of) Kents place & the river. If so, it would perhaps provide a great attraction.

From N.A. Kents to Tonoweep Point

May 3, 1933.

It has been suggested by Mr. Tillotson that the south boundary of Kents homestead be the deadline for grazing in the valley — that all land within the valley south of this line be reserved for antelope range.

This morning we drove over the area. It is well covered with grass and white sage, but very closely cropped. It would return to normal in a few years if given protection. The area in question is about 3 miles wide by 5-6 miles long. There would then be about 15-20 sq. miles of antelope range available. The forage appears to be excellent for antelope.

A seep is located at the east side of the valley about halfway to the river. This would supply some water at times. The antelope may have wintered only in the past in this valley, but I cannot say as yet. Anyway any such arrangement would confine them here the year round. The experiment might be worth trying.

At the north foot of Vulcans Throne is an artificial dry lake. It may cover about 160 acres. By building a low dam — say 6-10 ft. high, the water

draining 27 miles of Tuweep Valley could perhaps hold permanently for antelope. Inasmuch as their normal movements would be prohibited this seems to me as a justifiable compensating step.

Kent reported that he had just taken 1500 head of cattle out of the antelope area & driven them up toward the Thumbulls. The range shows severe over-grazing, although the porous character of the soil seems to prevent erosion. The cattle, however, must have been exceedingly poor because 12 of them were so weak they bogged in the lake bed & died. Locoweed was quite common on the range, although not nearly so prevalent as on the range between there & Fredonia.

On the Sandrocks today 2 Cinnamon Ground Squirrels were seen. Also tracks of one coyote.

Birds seen were:

White-throated Swifts
Piñon Jays
Sparrow Hawks, a pair courting
Gnat Catchers
Horned Larks
Rock Wren
Olive Sided Flycatcher
Purple Finches?

Barberry probably related to Oregon Gr

Ephedra sp.

Fouquieria

Two rather poor springs found on Sandrocks.

Chief plants observed on the Sandrocks were:

Juniper (Utahensis)
Pinon
A scrub oak (Quercus wilcoxii?)
~~Coursia~~ Fallugia paradoxa
3 species of Yucca
Agave
Opuntia (the smaller form)
Ephedra (E. torreyana?)
Cercocarpus (a narrow leafed variety)
Ribes
Ceanothus
Artemesia tridentata + Atriplex canescens
Snowberry
a ground hugging mustard
a spiny leafed phlox
scarlet pepstemon
Castilleja
wild four-oclock
an unidentified shrub similar to Cercocarpus.
an unidentified shrub similar to Ephedra except having dark purple double seed-pods (size of a small pea) and a very strong odor similar to ragweed.
An unidentified shrub resembling Forsellesia, except that the leaves were alfalfa-like, alternate, small, slender and adnate.

# Trip upon Mt. Trumbull.

May 4, 1933.

Today we followed a trail from N.A. Kents homestead up to the ridge of the Trumbulls. The range, from the valley floor to the manzanita district above Little Spring, showed heavy grazing and very little grass. Main species of vegetation were: juniper, pinon, sage (tridentata), ephedra, Atriplex canescens on valley floor, and chrysothamnus.
A brother-in-law of Kents has a homestead at Little Springs. There is a good supply of water for household & limited garden use, although the water is hard. Just above the chrysothamnus valley of the homestead, begin Gambel oaks and manzanita, interspersed with juniper, pinon & sage. Toward the top of the mountain are the following predominating species: Yellow Pine, Gambel oak, Manzanita, cercocarpus ledifolius (very abundant), Garrya flavescens (not heavily browsed except in over browsed areas and there utilized heavily). Toward the southern half of the Trumbulls, Snowberry, Purshia, Cowania, & a thorny species of Ribes are added to the list. Deer forage is excellent on the east side of the Trumbulls within the Monument.

One yellow-haired porcupine was seen in a bush near the south end of the mountains near valley floor. A few porcupine scars were noted on small yellow pines upon the mt. Porcupine damage is frequently in the region we traversed.

I saw no deer tracks throughout the day. In spite of the fact that this area has been in a refuge since 1930, I believe deer must be very scarce.

One coyote? track was seen (although it may have been the track of a stray dog.

Cinnamon ground squirrels were common.

On the valley floor, jackrabbits and cottontails were occasionally seen, perhaps 3 of each in 4 miles of riding.

This area can become valuable for deer & some of the carnivora, such as coyote & cougar, for, bobcat, but at present it is pretty heavily grazed by sheep & cattle.

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Plateau east of Tuweap Valley

May 5, 1933.

Trip today was from Father Pearkes' homestead, northeast to top of plateau, and about 4 miles over top of plateau to a cinder hill close to north boundary of the monument. From the top of this hill we could see the entire monument. The plateau area of it is all pinon & sage country with large sage valleys interspersed. Some Cowania & ephedra and Yucca well scattered. The region resembled the "Horse pasture"

on Jump-up Point in the Kaibab winter range. It is in much better condition as regards grazing than the territory between the monument & Fredonia, but it is already over-grazed & erosion setting in. Very little grass is present in the portion we saw. It is the best winter sheep range in the region. Possibly 40,000 sheep winter in the region. There is no water. Sheep leave as soon as the snow goes. A few deer are reported down on the points of the plateau at the river.

Sheep will have to be permitted in the area for many years but their numbers should be restricted. The area will never support a great number of deer. ~~Stock~~ The region is too arid and the browse is limited. It is similar, in general, to the South Rim.

# Grand Canyon

May 28, 1933

Interview with W. S. Hogan who first came to Flagstaff in 1892, came to Canyon in Nov. 1892. Has been in region ever since

Cattle ranged from Flag. to Canyon in winter and. Rounded up in 1890. Grass, bunch grass, was abundant everywhere on the plateau, & all through the cedars. Feed was abundant in the canyons. Not nearly so much now. More underbrush ~~than~~ now than then. Down on Jo to Plateau, Blackgrama & bunch grass abundant. Not nearly so much now.

Deer more abundant than than now. Indians hunted deer & had buckskins for Navajo blankets.

Many watered along breaks of Canyon. More water holes now than then. Had to go long distances to water.

Wt. sheep used to be abundant on Canyon. Used to be abundant on S.F. Wtr. Hogan killed 6 in one bunch on S.F. Wtr. None on SF Wtr. since 1898 approx. Two sheep at Hogans through now. Seen a month ago. Are in good condition.

Domestic sheep watered south of canyon but not along river

Antelope never came up to Canyon, but came as far as Moore place. Plenty on Cataract Canyon & along little Colorado in winter. Didn't come into cedars. Used to come near Little Rain tank & into old burn area north of VA ranch. Sheep herders get them.

Cougars were few here then. Not so many now.

Bobcats were plentiful along breaks of canyons & rims, not so many now.

Coyotes more abundant then & now.

Foxes (gray) were abundant. Still plenty of foxes.

Rabbits (cottontails) plentiful on rims, packs further back. Don't know what has become of cottontails but are scarce now. Predators are not responsible for fewer deer at present. Hogan thinks it is more hunting.

Turkeys: John Hayes saw 2 gobblers near Grand View about 1870. Thinks these two were transients. Food: juniper berries, pinon nuts, acorns, insects etc. Plenty of feed but thinks they wouldn't stay here because no water.

Grouse seen on North Rim, last
Fever south of river.
Porcupine winter below south
rim. Thinks there are more now
than formerly.
Beaver plentiful in past in
Shinumo & Bright Angel, & in
Kennit, & along river.
Otter seen at mouth of Bright
Angel creek in early 90's. Two seen
one winter & one another winter.
Trades seen about same.
Band-tailed? Pigeons, saw 2 last
year. Very rare.
Gambel Quail always very scarce.

Wolves, never along canyon, but
around S.F. mts.
Elk. Navajos say that elk used
to be on S.F. Mts. One winter in
heavy snow, elk forced down
& Indians killed them all.
No bear seen on South Rim.

The small Chrysothamnus is everywhere, and Apache Plume (Fallugia paradoxa) is at the upper edge of the Zonto.

# Kaibab Trail to Phantom Ranch.

May 31, 1933.

Just as I started down the trail, 7:00 A/M. a yellow haired porcupine was seen in a cave about 100 ft. below the rim. Crested Jays, (Cyanocitta stelleri diademata) were common. While in the junipers of the Kaibab Limestone belt I adopted for sheep sign and felt reasonably sure that the numerous tracks and bedding down places at the bases of ledges were of mountain sheep. Serviceberry (Amelanchier utahensis), & Cowania stansburiana were abundant down in the Coconino Sandstone, Mock Orange (Philadelphus microphyllus) was in bloom & abundant. Amelanchier goldmani replaced the utahensis, and a shrub appearing like Ribes was plentiful. These also extended into the Hermit Shale & Hop bush (Ptelea baldwinii) was added. Down on the Tonto Platform, Coleogyne or Burro brush predominates, with a scattering of Atriplex canescens, Artemesia tridentata, Cataclaya, Agave, Yucca baccata and flowering ash (Fraxinus sp.). Grass is scarce. Deer tracks were seen seldomly along the trail all the way to the Tonto.

Kaibab Trail to Phantom Ranch.
Bright Angel Creek is lined with willows and Baccharis glutinosa. Desert vegetation of Lower Sonoran type predominates. The stream is not cold — to the hand it felt about 60–65°. Has fairly steady flow throughout the year. Is stocked with Rainbow & Loch Leven trout — there may be other kinds, but not certain.

In the spring of 1932 three beavers (Castor canadensis frondator) came to the ranch from their colony about 8–10 miles up the creek, and gnawed down 2 or 3 small cottonwoods near the ranch headquarters. Moore, the ranch manager, complained & Brooks had them trapped with steel traps & sent to the museum as specimens. I did not get to the beaver area, but Moore reported them as "bank beaver". This is probably due to the grade and mountain slope of the stream. He says they live mostly on the cottonwoods up the stream.

June 1, 1933 I returned via Indian Gardens. There are 23 antelope at the garden. The caretaker says kids were born about March 15, and he believes there are at least 4 of them. The antelope are fed rolled barley

Other birds seen on the trip:

1. Rocky Wren (most distinctive)
2. Lazuli Bunting (Indian Garden)
3. Golden Eagle
4. Turkey Buzzard
5. Ferruginous Rough-leg?
6. Black Phoebe (Bright Angel Creek)
7. Black-headed Grosbeak
8. Mountain Chickadee "
9. Great Cataloes "
10. White-throated Swift "
11. Violet green Swallows "
12. Chipping Sparrow "
13. Audubon Warbler "
14. Slender-billed Nuthatch "
15. Piñon jay "
16. Numerous desert birds heard down on the Tonto which I could not identify

Indian Gardens

June 1, 1933.

~~The grain~~ are kept in the troughs. ~~Coke~~ ~~are~~ kept in the troughs day & night so that they may eat it whenever they want. They do very little browsing of native forage. During the morning I saw 4 of the bucks browse for a few minutes up on the slope. The bucks sparred with each other all morning, drove the does out of the shade, and were continually restless with the heat, flies, confinement and unnatural concentration of too many bucks. The shade is poor.

Rock squirrels (Citellus g. grammurus) were constantly at the first trough. 15 were eating at one time.

One Cinnamon ground squirrel (Ammospermophilus leucurus pinamontanus) was seen on Santa Platform.

Coming up the trail to Bright Angel I heard Canyon Towns frequently.

At Indian Garden a Long-tailed Chat squarehead conspicuously. Hummingbirds (perhaps broad-tailed) were common.

Range, as a whole, down in the Canyon & on the Santa, is very poor. I consider the antelope a failure.

No bobcat tracks seen.

Sign of one coyote seen on Santa.

Drift was heavy from wild life point of view.

Between El Tovar & Desert View
June 4, 1933.

The area east of the village overbrowsed in the past shows recovery obtained in the last 2-3 years. Cowania, sagebrush, the little oaks, serviceberry, young yellow pines, etc. are showing new herbage on the lower browsed limbs. In general all the area south and east of the village which I saw, is improving. There is an area, covering perhaps 5 miles east & west along the Rim road, near Grand View, near the water holes, which is severely overgrazed at present. This is the concentration area of Buggelin's cattle. Cowania is but about as hard as on the Kaibab winter range. Oaks, & all else, is browsed to stubs.

Brooks reports that Buggelin runs 400 head of cattle from south entrance road, east to Lipan Point, 5 months of the year — June 1 - Oct. 31. This, in lieu of 200 cattle all year, as formerly. Baldwins run 110 head west of village. 900 head of sheep also permitted in western portion of Park.

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14. Sparrow Hawk — common
15. Turkey Vulture — abundant
16. Raven — common

Fredonia to Ironwood Point

June 9, 1933.

Between Fredonia & Pipe Springs:

Fallugia paradoxa — in bloom, common
Amsonia hiar sp. — common
Atriplex canescens — in bloom, abundant
Chrysothamnus sp. sp. — abundant
Artemesia tridentata — abundant
Loco weed — seeded, abundant
Grasses (Slender wheat, bunch grasses and others) — common
Juniperus utahensis — locally

The range, as everywhere north & west of the plateau, is good at this season but the undesirable forage plants (resultant from over-grazing) are abundant everywhere.

Birds seen on the whole trip:

1. Montezuma horned lark — abundant
2. Desert sparrow — common
3. Lark sparrow — common
4. Chestnut-backed bluebird — rare
5. Western robin — few
6. Shrike — common
7. Mourning dove — common
8. Vesper Sparrow — few
9. Townsend Solitaire — few
10. Mountain bluebird — abundant
11. Prairie falcon — rare
12. Western red-tailed hawk — rare
13. Meadow lark — common

In Tonoweap valley the genera of forage plants listed previously were rediscovered. The only error found was that Fallugia paradoxa was on the sand-rocks rather than Cowania stansburiana. Otherwise, everything appeared the same.

Ammospermophilus leucurus cinnamomeus common. Jack-rabbits seen, few.

Kaibab winter range

June 10, 1933.

Trip as follows:

Ryan to Slide & half way to Jump-up; thence return to road from which Slide road branches & south to Pine Flat & Sowats Point; thence to VT Park via Dry Park ranger station. The range may be treated as a whole.

The range looks much better than in March. Service berry and the low oaks are in full leaf & they greatly hide the over-browsed Cowania & Juniperus. The intermediate range everywhere shows marked improvement. Between Ryan & the Pine Flat turn-off, however, great quantities of Cowania have been killed outright.

My Feb-Mar. impressions are not changed for Cowania. The other (less desirable) forage plants of course look better in leaf than when seen bare. However, I still cannot recommend an increase in deer — perhaps for many years.

In VT meadow this evening we counted 52 deer in the herd. They were too wild to approach, but appeared to be in good condition.

Aspens are just beginning to leaf on top of the plateau although they are in full leaf lower down. We saw very few aspen sprouts.

One Goshawk seen near Pipe Flat.

North Rim, Grand Canyon
June 11, 1933.

Trip:
Headquarters to Cape Royal to Point Sublime.

Five deer seen between check station & headquarters. One coyote in fine pelage seen near Cape Royal. One Kaibab squirrel at headquarters. Flock of 60-70 ravens feeding in VT meadow all day. Ferruginous Rough-leg, Swainson, Redtail hawks seen in the park.

The range from headquarters

to Cape Royal is superb. Grasses very abundant. Locust abundant. Serviceberry & Gambel's oak also abundant. For many miles, however, there is no aspen reproduction, but out near Cape Royal it is abundant for 2-3 miles along the road. All this portion of the range shows signs of over-browsing in past years, with notable recovery in recent years. All large aspens appear to have been browsed as high as deer can reach. It is our opinion that the range is being utilized to the maximum without deterioration, at present.

For about a mile on Cape Royal past overbrowsing has been as severe as any place on Kaibab winter range. Immense amounts of Cowania killed outright. Toward the neck of the point little recovery is evidenced, but on the main body of the ~~road~~ point Cowania shows recovery where protected by snow & ~~rock~~ some utilization above the snow line.

Forage components on the point are almost identical with lower winter range (Kaibab) & sandrock.

This point has suffered damage to perhaps 75 years of growth. Utilization is still so heavy that it may take 50 years to recover, provided overbrowsing does not recur.

The north rim should support no more deer than at present, for many years.

The range between headquarters & Point Sublime is, as always, not very productive. Grass is present in spruce belt. Not much forage of any character in yellow pine belt. Point Sublime proper shows some recovery (especially Cowania) except at necks of point. Its rate of recovery is about the same as at Cape Royal.

Camp equipment — tables, benches, comfort stations, incinerator & signs have been placed on the point. They are unsightly and unnecessary, & greatly detract from the point.

North of U.S. 66. Highway

# Petrified Forest

June 14, 1933.

Range shows overgrazing. Cattle have grazed in the area for years. Some cattle still graze in the monument.

Range character:

Slender wheat grass, wide spread
Other brush grasses present
Atriplex canescens, some
Atriplex confertifolia, common
Chrysothamnus sp. plentiful along streams
Either Gutierrezia or small Chrysothamnus
Artemesia tridentata nova? common
" " common but not abundant.

The range looks good for antelope. Supt. Smith reports that antelope have always. George Hennessy, a cattle inspector says the same humerber of antelope have have been here for 30 years.

Ray Tubbsville, state live stock comm. has about 2,000 head of cattle. About 200 antelope range on his property & he wants to get them out of the monument.

38 antelope on Aztec Land & Cattle Co. at southwest corner of park.

Another band of 30 antelope range just southwest of park on State & U.S. Land.

These bands of antelope range near Petrified Forest about 6-8 mpo. of the year. In winter they move southward toward the higher lands near the White Mts. It is apparently warmer there — this being a cold pocket.

Charlie Cooley, an Apache Indian in ~~Winslow~~ Holbrook, says the antelope have held about their same numbers for the last 30 years.

Mrs. Smith - 1929 in late May two antelope does dropped fawns at waterhole just inside southeast corner.

In 1932 in late March. Smiths, Toll & La Combe saw the band of 38. There were two fawns then.

Mr. Tuttle says that antelope eat his rock salt.

Canyon de Chelly

June 15, 1933.

Boundaries of the monument have not been located, although specified. A road leads along the top of the canyon but none up the canyon bed. We drove up the sandy bed of the wash in a Ford with air wheels. This mode of locomotion seems quite satisfactory over the sand. It was agreed by all of us there that no road should ever be constructed up the canyon floor; that people should be transported by a supervised fleet of air-wheeled govt. cars, leaving their own cars outside unless they had proper tires. This would insure preservation of the primitive state, & prohibit rifling of the ruins.

The area is unsuitable for wild life development. However the fern forms such as birds & reptiles are interesting to the tourist & add to the pleasure of a trip.

The white palace needs protection from undercutting by the stream. At least half the lower ruin has already been swept away. A low brush & stake buffer, about 12"–15" high has been installed but is insufficient. Most of the valley floor is sandy stream bed.

Mesa Verde

June 17, 1933.

Arrived yesterday afternoon. The mesa is extraordinarily densely covered with green browse. Gambel oak (2 species?) cakes and purshia are abundant, and in full leaf. We have never seen such quantities of deer browse & no signs of utilization.

Deer are reported to have been abundant last fall moving down toward Wanco Canyon. During the winter various observers ~~saw~~ reported fresh buckskins on the Ute Indian reservation. Few deer were observed returning in the spring. This leads Paul Franke to believe that the Ute Indians take a heavy toll of the park's deer. We have seen no deer today nor tracks. Supt. Finnan still hopes to develop water holes for deer. Perhaps the experiment is meritorious, and appears to have no undesirable aspects.

Porcupine damage was observed at Cliff Palace. Although far less recent damage was in evidence than in 1931, many old & young pinon pines, directly beneath & vital to the ruins were badly damaged last winter & this spring. It seems to us that someone should be delegated or

hired, if necessary, in winter to stay at Cliff Palace & shoot every porcupine in the canyon immediately around the ruin. Damage is already so severe that no further damage can be tolerated. What appeared to be a porcupine den in the boulders below Cliff Palace was seen.

Coyotes were heard howling last night down Spruce Tree Canyon. They are reported numerous.

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## Mancos Canyon

July 6, 1933

Canyon floor sheep grazed (utes) barren, no grass. Atriplex canescens and some shadscale. Artemesia tridentata abundant. Large quantities of a sesbum-like bush. (Sheep camp).

As we progress up the canyon between Navajo & Soda canyons box elders become plentiful along the stream interspersed with a few cottonwoods (narrow leaf). Rhus trilobata is abundant, overgrown and covered with the red berries. Small oak thickets (Quercus gambelii) are numerous and have been heavily browsed by ute sheep & horses. There are dense ground thickets from the tips of browsed twigs

Beaver (Castor canadensis frondator) work
are numerous all along the portion of
the Mancos traversed by our party. F
Beaver cut trees range all the way
from very old stumps, almost obliter
to last years workings. They are mo
numerous as one progresses up th
canyon.

beneath the stems 10 ft. high. Juniperus occidentalis common. J. sabuloruma occasional. Grass is mainly absent but by the sheep camp 2 miles west of Nataqo Canyon we found grass roots & stubs beneath the top soil. Bunch grass was probably sparsely but generally scattered over the floor of the canyon. Artemesia tridentata & Atriplex canescens remain fairly constant up the canyon. Old burned areas come back in a coarse grass resembling bear grass. The burning here is evidently failure. Numerous / willow thickets / are found along the meandering Mancos river.

Pine canyon, between Soda and Prater, is a few miles, perhaps 3, long, gorge-like & picturesque. We found 4 groups of ruins within the first mile. A strip of bunch grassland, a few hundred feet wide, extends along both sides of the stream in the lower reaches of the talus slopes. Cercocarpus montanus Amelanchier sp. / Rhus trilobata, / abundant, Purshia tridentata common. This canyon possesses excellent winter forage for deer & Mt. Sheep; at such times / as snow on the mesa might drive the deer down in the canyons. It should be in the park.

# Mesa Verde

July 7, 1933.

Today we climbed north out of Stevens Canyon, crossed the Ute Reservation portion of the mesa to the south boundary of the park, following up Big Mesa between Prater & Stevens Canyons.

Much of the Reservation part of the mesa is old burn, with an abundance of bunchgrass, penstemon, Mariposa lily, Cercocarpus, Fendlera, Amelanchier, Purshia, with higher up within the park an admixture of Gambel Oak. Grass becomes more abundant within the park. Two Ute tanks (water holes) were found, as we thought just within the park.

Domestic sheep graze this whole area, both park & reservation, in summer, although no overgrazing is evident as yet. This is the greatest portion of the mesa. It is the finest deer range I have ever seen. Grass ~~dt~~ grows beneath the juniper & pinon forest just as it does in the burned areas.

This is reported to be the deer winter range of the mesa. It is here that most hunting & poaching occurs. This should be taken into the park. Boundary should follow Wards R. all the way

# Rocky Mountain National Park

July 13 1933

Arrived July 10th. Spent 2 days in cleaning up mail & reports.

Rogers reports in informal interview that:

Elk are increasing. Probably around 450 now. Range, especially winter range, is improving since portions of Moraine, Beaver & Horseshoe Parks have been purchased & many fences eliminated. The elk seem contented in winter to remain in these areas.

Porcupines have greatly increased. They are all over the park. Rangers are instructed to kill them when they see them.

Bears are still no great problem although they usually invade civilization after a dry spell.

Wolves are apparently not here. The previous reports may have been erroneous.

Rocky Mountain

At end of Fern Lake road.

Grass & forage are very abundant.

The following species are herewith identified:

1. Pteridium aquilinum, Bracken Fern, common in shade of aspens about camp grounds & along streams.
2. Phleum pratense, Timothy, abundant under aspens all around camp ground.
3. Agropyron spicatum, Bunch wheat grass, commonly mixed with other grasses.
4. Carex festiva?, Sedge, common around camp.
5. Poa? (about 1½-2 ft. tall) very abundant.
6. Anemone canadensis (Northern anemone).
7. Heracleum lanatum (Cow Parsnip) abundant.
8. Rosa sp. (Wild Rose) abundant
9. Geranium richardsonii (Wild White G.) common
10. Achillea millefolium (Yarrow) few
11. Trifolium pratense (Common red clover) common
12 " repens ( " white " ) "
13. Aspen thickets showing little browsing
14. Populus angustifolia (narrow leaf cottonwood) common.

At west edge of Moraine Park.

1. Dasiphora fruticosa (Bush Cinquefoil) few & heavily browsed.
2. White flower panicled 4-opposite leaved, square stemmed mustard common
3. Willows sp. show considerable browsing.
4. Artemesia frigida (fringed sagebrush) not abundant.

5. Betula fontinalis (Mt. Birch.) common along Thompson River but not browsed.
6. Grasses everywhere abundant.
7. Eriogonum umbellatum (Sulphur flower) abundant all over Moraine Park
8. Alnus tenuifolia common along roadside. Does not show browsing.
9. Purshia tridentata, common on rocky slopes. Shows heavy browsing.
10. Ribes cereum (Squaw currant) very common under yel. pine on rocky hills throughout Moraine Park. Shows universal browsing but never heavy.

About ½ way over cut-off from M.P. to Highdrive.

Aspen thickets: Every Aspen barked by elk but not sufficient to endanger tree. Far more elk sparkling than when here two years ago. Young aspen repro. abundant, apparently often hidden by snow, but with tips browsed.

Purshia tridentata taken most heavily.
Artemesia " next in choice.

Both of these severely stunted by elk browsing.

Aspen taken just as heavily where possible, but is usually in lower hollows, & hence more snow protected.

Sample plots should be fenced immediately & range study instigated to

find just what elk population this area will support.

Dasiphora fruticosa (Bush Cinquefoil) and Ribes cereum taken unionally & about evenly, but stunting is not serious.

About 1 mile further north.

Large aspen groves east of the cut-off are severely barked. Small clumps have died from barking. Rubus leptopetalus badly mutilated. Willows eaten to stubs & many dead.

Grasses not abundant. Sedges abundant. Dasiphora (Cinquefoil) & Ribes abundant & only moderately browsed. Pursh Lit/hard, & is scarce, except on hill tops.

## From Estes to Phantom Ranch

July 14, 1933.

Mr Laughlin reports seeing 23 elk "snowed in" upon Trail Ridge last march. One skeleton remains. What became of the others is not known. 7 ft. of snow fell & no wind came to blow it off. He thinks there may be around 200 elk in winter around Moraine Beaver & Horseshoe Parks. It is his opinion that deer & not elk eat browse the Pursh & Sage Brush. Deer remain on the exposed rocky hillsides whereas the elk feed in the meadows. High

winds, lasting sometimes for days, seem to drive the elk into the aspen groves where they remain during the periods of wind. It is at these times, he thinks, that elk bark the aspens.

About a week ago he saw about 80 elk upon Trail Ridge, above timberline, south of the road. This is above Forest Canyon & about where J. Dixon saw them in 1930.

Near the North Inlet (just south of Flat top Mountain) on Andrews Peak, Dunn reported seeing over 100 sheep about 2 yrs. ago. He did not get an actual count

Mac. also reports seeing 23 Mt. Sheep above timberline on Trail Ridge in this spring.

Between 4:00 and 5:00 PM this afternoon we watched a band of 9 "Bighorn" at Sheep Lake. One young ram was seen among them. It was impossible to tell whether the others were all ewes or mixed. They were shedding the winter coat, pieces of which hung down in tags and shreds. There was no sign of scabies or any other disease noticeable to us. All were fat and in excellent condition. One remained "on guard" above the flock the entire hour we were present.

Two Band-tailed pigeons flew about the trees over the sheep lick.

Sheep Lake, July 17, 1933.
About 7:30 P.M. another o & d drove by Sheep Lake. Two female mallards were observed in the lake, each with a family of about 12 young (it was impossible to get the exact number because of the water growth). It is reported that one or two raise a family here every year.

I have seen no sign of the muskrats so commonly seen in these ponds in 1930.

Grand Lake

July 18, 1933.

This afternoon John MacLaughlin, mother & I drove to Grand Lake. Not even a marmot was seen along Trail Ridge. The day was cold and stormy.

At Grand Lake, John & I drove about 2 miles southeast of the Outlet and climbed the trail to the fire look-out on the ridge just south of the lake. The entire route lays through medium sized lodgepole pine, characteristically dense.

Underbrush is scarce in this forest. A few Ceanothus velutinus shrubs were found. Two Snowshoe rabbits were seen about 9000 ft. el. One was eating horse manure in the trail. Deer tracks were seen 4 times on the 3 mile trail.

This lodgepole area does not appear to be very valuable from the wild life angle. Mac Laughlin says it is characteristic of the whole southwest corner of the park beyond Grand Lake. It is valuable as a protection or buffer area.

Baker Gulch

July 19, 1933.

This morning Chief Ranger John Mac Laughlin, Ranger Fred and I rode horses from Holgwarth's Dude Ranch up Baker Gulch. Holgwarth's land takes in the willow bottom area of the valley. A narrow dry, rocky strip of lodgepole 'pine' is next traversed, and then one comes to Baker Creek. An old mining road leads up Baker Creek. ~~From~~ From the lodgepole stand one goes through numerous swampy areas.

A dense forest of fir and spruce runs up the canyon, interspersed with aspen groves, rocks and snow slides. Undergrowth of Mountain Maple, Alder, grass and wild flowers is dense. The whole canyon area, like the other cirques in the Ypsilon Summer Range is wonderful summer range for elk & deer, and higher up, for sheep. Pygadeums (death camas) is abundant in the canyon & along the damp places.

About timberline we saw 3 bucks with antlers in the velvet perhaps $\frac{2}{3}$ developed. All were grazing in little meadows, and were about $\frac{1}{2}$ mile apart. Marmots & conies numerous. A small cirque lake lies west of Baker Gulch, just above timberline. Pipits were numerous here with half grown young. Two of the young flew out into the lake and drowned.

The canyon turns south behind & just west of Baker & runs into a natural pass down into North Park. Indian arrowheads were numerous here.

This area is within the Routt National Forest. Trails so numerous

Table Mountain +

as to indicate domestic sheep grazing lined the hills around the park. This section of the country, ~~presents~~ magnificent scenery, is ideal wild life range in summer & fur-bearer habitat, and should, while, be within the park. It would remove civilization influences a step further back from sheep, elk & furbearers. There is no winter range within the park on the west side, however, and territory southwest of Grand Lake & around ~~Flattop~~ Mt. would be a necessary correlate of additional summer range. No elk are known of in this area.

Returning over Trail Ridge at sunset we saw one ptarmigan (plumage still splotched with white) near the summit, one doe above Poudre Lake, various marmots all along the road, and 14 elk grazing above timberline on the Forest Canyon side, about 1 mile east of the summit.

Willow Park to Junction of Poudre and Chapin Creeks, & to Hague Creek.

July 25, 1933.

A brushed out trail, seldom used, leads from shelter cabin over Chapin Pass and down into Chapin Valley, a grass & willow swampy valley between two ridges both reaching above Timberline. Forest bordering most of Chapin Valley, & indeed over most of north end of park is dense lodgepole pine with thick carpet of grass & dwarf huckleberry. Deer trails follow the meadow. Deer tracks frequently encountered.

At junction of Poudre & Chapin Creeks, about 6 miles north of Fall River Road, was a series of deserted beaver ponds in the willow thicket. The ponds had been deserted sometime this spring. It looked as though high water had been responsible. The area did not appear to have been occupied more than a few years. Possibly these were the beavers from Poudre Lake, which are reported to have deserted there 2 yrs. ago. The mud bottoms of the ponds were covered with deer & fawn tracks, 1 coyote's tracks, 1 Spotted Sandpiper with fuzzy young one. One doe seen just before we reached the ponds, & 1 fawn Hoary.

Ranger Wilson overtook us here. Said he had seen 6 fawns this morning enroute

from Poudre Pass. He believes the Specimen Mt. Sheep Herd to be about 23 now, whereas in 1926 he counted over 300 there. MacLaughlin believes the road construction has kept sheep from the Flattop Mt. area from crossing to Specimen as they were accustomed (he believed) to do in past years. Wilson has no suggestion to offer in explanation of their disappearance.

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From junction of Hague & Poudre Creeks to Head of North Fork Thompson, down latter to Ranger Station, south to McGraw & into Estes Park. July 24, 1933.

The valley of Hague Creek is similar to that of Chapin & Poudre Creeks, namely grass & willows. About ½ mile below junction of Hague & Poudre is northwest boundary of park. Cattle graze right up to the boundary. There is nothing to keep them from crossing into the park, which they frequently do. We saw cow chips up almost to timber-line above Hague Creek. A ditch fence across the narrow Poudre Valley at this corner of the park would stop cattle from wandering up Chapin, Poudre, Hague and Long Draw valleys & be a most effective buffer to protect much of the north end of the park.

Two batches of deserted beaver ponds were seen up Hague Creek. They appeared to be temporary habitats of the beaver, probably washed out by high spring water. Just before we left the valley to climb the left hand ridge we found a newly built occupied beaver pond. It is possible that this is still the same Powder Lake set of beavers which has migrated this far.

Forage all over the northern end of the park is very abundant. It is superb summer range. Considerable Cercocarpus is mixed with the willow. Zygadenus is common. The Forest Service wants this section of the park.

Discussing Research Reserve areas with MacLaughlin, we both thought that the upper end of Hague Creek would be a good possibility. It is enclosed & isolated on every side by high ridges, except the egress from downstream.

Above timberline by Mummy Pass, Mt. sheep tracks were numerous. We saw at least 4 mt. sheep upon the shoulder of Hague's Peak. Judging from the abundance of tracks, there might be 50-100 sheep in the region.

Pipits & White-Crowned Sparrows numerous above timberline. Tundra birds fluttered over

the inclows frequently. One Ptarmigan seen near the Pass. Coniers & Warmots were heard incessantly above timberline.

Just north of Lost Lake and about down to timberline elk tracks & droppings became numerous. This must be a part of the summer range of the McGraw or Cow Creek herd. Mac Laughlin reported seeing 11 elk a year ago grazing in the cirque above Lost Lake. One Golden Eagle seen on trail here today.

Down in the valley of the North Fork of the Thompson river, for about 3 miles above the ranger station, willows in the meadow showed signs of hard browsing. Whether this is due to elk or domestic stock in past years is uncertain. The willows show improvement.

From the Ranger station to McGraw the trail crosses 3 ridges & Grouse, West and Cow Creeks. Lodgepole, limberpine, Doug. Fir, Engelman Spruce, Yellow pine, Aspen, Alders, Cercocarpus, Juniper, Ribes, Raspberry, Kinnikinnic, Purshia & grass make up the cover. This is the more arid rocky portion of the park, and the only part so far seen which is suitable cougar country. Mac Laughlin

says it is the cougar area. However it is evidently too near the park boundary to be a refuge.

At McGregors the beavers have been trapped out of Cow Creek.

Rocky Mt. Some common grasses of Moraine Park. Aug. 2. 1933

Stipa vaseyii? Porcupine grass
Bouteloua gracilis. Grama grass
Muhlenbergia montana — resembles slender wheat, but florets not sessile
Poa pratensis? along road in Moraine park
Bromus, same place, coarser leafage & heads.
Koeleria cristata, June grass, resembles timothy head but more of a panicle
Danthonia, oat grass. Big grains awn out of back of lemma

See Appendix, 1912 American Bison Society Report for Wind Cave data before going to Wind Cave.

Bighorn Mountains
to
Yellowstone National Park

371.A.

Aug. 9, 1933.

~~Yesterd~~ This morning we drove through the Bighorn Mountains, enroute from Sheridan to East Yellowstone. Their extensive meadows are even, where known with drought, covered with the wingless red grasshoppers, and heavily grazed by cattle & sheep. Grass & browse is abundant but beginning to show unmistakable signs of over-grazing. The grass & weed stages have appeared, and recent erosion gullies are showing on exposed hillsides. Willows show much breakage & browsing and present a stubby appearance. Yarrow & Chrysothamnus are widespread.

This region, because of its open, rolling character and extensive meadows, willow thickets, browse and water, is one of the most favorable game or wild life areas we have ever seen. It is no wonder the trappers found it so. The bighorns, however, for which the range was named, are gone. Trophies are gone. Some deer & elk reported. The country west of the range is arid badlands.

391.B

# Yellowstone Park

Aug. 11 1933.

From 1:00 to 4:00 PM, Ed Howe, Knight & I looked over the new horse pasture on Pelican Creek. The pasture is located about 3-4 miles (estimated) distance south of the Lower Falls road. It is to be on the upper edge of the elk winter range. Fences & corrals are already built. Some supervising and looking for trespassers will be necessary in the area. The best part of the pasture is reported to be heavily timbered and almost killed out. All of the trees have been recently barked. Many of the trees are falling to pieces.

The pasture is to care for about 50 horses during the summer, in order to have them readily available in case of fire. This is important as far as it goes, but it is unfortunate in that it makes it almost impossible to further object to the companies holding their 200—300 horses in the same vicinity.

Yellowstone National Park

Aug. 9.

This evening about 6:00 PM we saw a Great Gray Owl in the meadow about ½ mile east of Squaw Lake. The owl was in plain view, standing among the grass of the meadow. We watched it for about 4 minutes, during which time it perched on various stubs and posts, swooped once to the ground ~~ax~~ though after a grasshopper or mouse in the grass, apparently got nothing, and finally flew to a clump of trees too far away to see.

About 10:00 o'clock this evening we heard Great Horned Owls hooting out on the parade ground at Mammoth.

Aug. 14, 1933

This afternoon, from 4:00 to 7:00 we were at Swan Lake. A pair of Trumpeter Swans has nested on the lake this year, for the first time in many years, and has been seen with 3 cygnets. We think it may be a young pair nesting for the first time, perhaps the pair seen there last summer in July & then seen mating at

Lake of the Woods long after the regular mating season. At least all these unusual factors suggest such an explanation.

The swans have already lost all their cygnets. No sign of them was found. Wright walked around the lake & found no sign of a nest. It is probably in a slough on the far side where he was unable to go. Their preening ground is also on that side of a promontory.

About 30 ducks, too far out to identify were on the lake.

Aug. 15, 1933.

From 5:00 to 7:00 PM I drove from Mammoth to Old Faithful. A coyote in fine tawny reddish foliage was seen by the road at 7-mile bridge. About half a mile north, two does were seen. A black bear was at Apollinaris Spring; a bull elk with antlers in the velvet, fully developed at Norris; about 12 elk in Gibbon Meadows; About 40 elk and 3 sandhill cranes (1 immature) in lower geyser basin, and marsh hawks

Aug. 24, 1933. Referring back to this note, it may be said that the game notes for the evening of Aug. 15th are fairly characteristic of the game we have seen every evening since, whenever we have been on the road at this time of day.

seen in several of the meadows. At 9:30 P.M., 3 porcupines were seen along the road between Madison & West Yellowstone; ~~they~~ were each was alone; one was about ½ grown.

Aug. 16, 1933.

Elk Range inspection today with Mann, Montana State game warden; Sanford, " " " Commissioner; Madsen, Supervisor N.E.R., USNPS.; Wright, Chief, N.E.D., USNPS.; Tom Banner, Montana game deputy.

As would be expected from this summer's drought in northern Wyoming, the elk winter ranging in Yellowstone, from the Jackson Preservation Ranch to Lower Falls, is almost bare. The grass simply did not grow this summer. Everywhere the hills are bare & brown, and every stone shows. The aspen & coniferous repro. was hit harder last winter than ever before. Little douglas firs, pines & firs along the roadsides are doomed to rage. The aspens are stubble. The mature aspen groves are dying

out and no repro. is succeeding. It appears although the mature aspens which have been heavily barked by elk in past years are dying prematurely. They may be weakened sufficiently that in a period of drought they succumb more easily. Sagebrush, especially in the Mammoth region & below is largely killed outright. Chrysothamnus & the Artemisias & rye grass are everywhere abundant.

I see no hope for this range unless the elk are drastically reduced. The aspen groves will be gone in a few years.

It is agreed by all present in the inspection party that at least 3,000 elk should be removed this winter. If the winter is severe, a heavy loss is feared.

Marr is non-committal but it is believed that he will not oppose the hunting.

Antelope were seen frequently in the Tower Falls, Trumpeter Lake & Slough Creek regions.

Yellowstone Park
Yellowstone Lake & Upper river.
Aug. 18, 1925

Trip with Fred Foster, Madsen & Wright.

No pelicans were seen at the Fishing Bridge nor anywhere in crossing the lake. Numerous American Mergansers were seen in little flocks at intervals along shore line in the southeast arm.

Taking an outboard motor we drove up the Upper Yellowstone river about 3 miles, from 4:00 to 6:00 P.M. Mergansers were along the river by dozens. Here and perhaps 50/60 in the distance covered. A family of 4 immature Buffleheads encountered. Three herons and numerous seagulls (California) seen, as well as several muskrats, a Swainson Hawk & a Marsh Hawk. One bull moose in perfect condition with antlers in the velvet was found dead in the river about 1½ miles. Someone had shot it about 4-5 days previously.

The banks of the rivers are frequently & abundantly lined

with beaver trails, and bank burrows are numerous. Beavers must be in this region by hundreds. Their trails lead from the bank back into the willow thickets. The willows are eaten noticeably on both banks for a distance of about 50 ft. back from the river. Moose & elk trails are very numerous through the willows. Moose tracks were frequently encountered along the river. This is in reality a moose and elk paradise. Grass is abundant through the willow patches. Brome, Orchard grass, wheat grass, Redtop and possibly Poa were seen. There were others, as well as Cinquefoil wild geranium and numerous unidentified weeds. Black bear tracks frequently encountered.

Aug. 19 1933.

Last night we fished in the west bay at south end of the cove. 5 spotted trout from 12-14 inches long, in good condition & not worn. Inflated weed

caught within half an hour.
Calif. gulls, both mature and
young of the year, gathered
in front of the camp.

We visited both of the pelican
nesting islands. They started
on both this year, which
they have not done in several
years. About 100 young
pelicans swam about. They
cannot yet fly. Perhaps
25 adults were with them.
Since no other adult pelicans
have been seen it is
probable that they are living
in Pedrock Lake at this
season of the year.

Two cormorants flew from
the island at our approach.
A spotted sandpiper and a
Wilson's phalarope were out of
shore.

Several hundred Canada
Geese were seen in large
flocks at the southeast
arm and the Flat Mountain
arm of the lake. They were
in flocks of over a hundred
each. No cranes nor swans
were seen or reported.

Yellowstone Park

Antelope Creek Buffalo Pasture

Aug. 23, 1933.

Party of inspection:
Baggley, McCarter, Ford, Haight
& Thompson.

Plans have been drawn up for the corral & survey made. The main pasture is to include about 600 acres of meadow land on the watershed of Antelope Creek. Lodgepole pine & aspen thickets are included, as well as the willow thickets along the creek. The latter is good moose country & have been much browsed but presumably may do by elk. That moose

We have suggested that the long narrow neck from field to the corral be considerably widened to prevent trampling of grass & erosion. This will probably be done. The pasture will contain between 700 & 800 acres in all.

Grass is very abundant over the area and it is above the elk winter range. Considerable sage brush exists in the portion next the road. We think however, that the paddocks should not be stocked with more than 50 buffalo each

the carrying capacity of the range is determined by experience. Some few elk may be caught and held in the paddock each year, although I see no necessity for doing this since elk are so readily seen along the roads morning & evenings. A bull moose was browsing along the stream this morning as we looked over the area. His antlers were still in the velvet although apparently full size and probably close to the shedding.

Small bands of antelope were seen west of Lower Falls station, around Trumpeter Lake and near the buffalo ranch.

This evening between 5:00 - 7:00 P.M. we drove to Old Faithful. A bob-tailed coyote ran across the road by Swan Lake. The swans were in the middle of the lake. A bear (black) was seen near Apollinaris Spring, one bull elk at Norris, no elk in Gibbon Meadows, but about 50-60 in Lower Geyser Basin. In this basin 12 families of Canada, 3 each, were seen.

west of the road and about ½ mile apart. They ignored the passing cars.

At the C.F. bear show, 11 blacks and about 9 grizzlies with 3 sets of twin cubs & 1 single came in during the evening. The bears were very quiet; there was practically no fighting.

Returning about 11:00 PM, we saw 2 does by the river just 5 miles west of Norris.

August. 24, 1933.

Trip to Game Preservation Ranch with Baggley & Wright. Most of the land made available to the park by act of congress has been purchased and the fences & buildings destroyed. Baggley said that 5000 acres of the possible 7,000 were now park property. Everywhere over this area are the unmistakable signs of over-grazing. Grass no scarce & sagebrush is heavily taken. About 20 acres of wheat and striped grasses (Alsike clover, Hungarian Brome & Timothy) have been planted where irrigation

was possible. This crop has grown well & the grasses are well started. It is Baggley's intention to leave the area alone & not attempt to farm it. Another area of about 70 acres has been cleared of sagebrush & used as an experiment and only sown. Unfortunately the seed was impure & the future patch is a tangle of lambs quarters. It is Baggley's purpose to try planting grasses here to see whether forage can be produced in sufficient abundance to offset the return of the sage.

I think that the experiment is doomed to failure:

1. The region is too arid.
2. Sage brush is very persistent.
3. Irrigation would be necessary.
4. It is apt to accelerate erosion by denuding the soil.

The acquisition of this area cannot materially relieve the elk situation at present, because elk wandered over the region before it was acquired. By adopting this area for domestic grazing higher, more forage will be available to elk in the future.

From Mammoth, we drove to Canyon. 3 moose were seen in Trillow Park about 6:00 P.M. Several elk were at Norris, and two bears seen between Norris and Canyon.

Bears at the Canyon Feed Platform:

Grizzlies: 3 last yr.'s cubs.
2 females with 3 cubs each
2 " " 2 " "
3 " " 1 cub
3 without cubs.

Blacks:
6 without cubs.

It was reported during the lecture that 5 sets of grizzly triplets have been seen this year. The triplets of last year are the cubs of the grizzly shot for attacking Mr. Chandler. This proves, in one instance at least that they can care for themselves during the first winter without their mother. Two of them appear to be normal size; one is slightly smaller. The 3 still stay together.

A strong wooden fence has been run back from each end of the ranks to well

behind the audience, it has been left open, untied, on the back. Cliff is unfortunate because cubs have several times gotten in behind the fence and are very difficult to drive out. The grizzly mothers usually defend their young and on one occasion charged within feet of the rangers then turned away. This fence should be closed in haste.

About 10:00 P.M. we returned from Canyon a mile or ran across the road in front of the car, perhaps half way between Canyon & Norris.

For Trumpeter Swan data see notes of Y.N.P.

For Glacier Park notes, see notes of Y.N.P.

Yellowstone Natl. Park
From Mammoth to Yellowstone Lake.
October 6, 1933

Last night while making two trips for Dr. Ruslaff to Obsidian Falls no bears were seen. But several visited the garbage cans back of Hamilton's D.F. Store. Two coyotes were seen during the night between D.F. and M.V. The sandhill cranes were not seen in Lower Geyser Basin. It is possible that they have left in migration. Elk and deer were seen constantly along roadside throughout the night. Observations were made in great haste because of hurried medical trip.

This morning we left Mammoth about 7:30 A.M. Elk & deer numerous around Mammoth. Near Lake Junction no cranes seen where they were usually to be found. Geese still plentiful along the Yel. River. Mergansers, mallards golden eyes, few ruddys still present & fall along the river.

At the lagoon on Mary's Bay at least a thousand ducks were present. They flew at our approach so that few identifications were

possible. Mallards were heard, two Buffle-heads seen, perhaps 50 Canada geese. On the bay, 12 swans (probably Trumpeters) were swimming in pairs. They moved out toward open water but did not trumpet or fly.

About 1 mile west of the Osborn nest on EE road, a Great grey owl was seen by the road. It flew among the trees & was soon lost from sight. It appeared to be larger than either of the two Red-tailed previously seen.

At Pelican Creek crossing of the south fork of Astringent Creek a very large coyote watched us from about ¼ mile distance. The Pelican Creek all the way to Lake through lodgepole timber elk were heard bugling, counted, two or three at a time. Sometimes several at once. Elk & fresh buffalo tracks everywhere seen. Judging from the sign, perhaps 100 buffalo had recently (within a week) moved into the valley. Time precluded our visiting Jem Lake. Jem Lake covered with a thousand

or more ducks — mallards, goldeneye scaups, coots, rudolys, and a few Canada Geese identified. One Sora Rail seen and one Wilson Snipe. The snipe identification is quite certain, and is the first one seen in the park. ~~Hooded Mer~~ Saw Spikes very low this year. Sedges & marsh grass very abundant, but the entire marsh growth at the south end of the lake (where swans nested last year) was out of the lake water and now constitutes a mud flat. It seems to me that the lack of water may possibly have interfered with the swans' nesting this summer. At any rate, no cygnets were seen on Jamor or Lite this season, and all swans had left these lakes by the time of our visit today. Since 10 swans were reported from here this summer, and 2 from Manzanita lagoon. It is possible that the 12 seen on Manzanita Lagoon this morning accounts for this lot.

As we returned down Lincoln Valley we met numerous

of elk were out in the valley. Each group of cows & calves was accompanied by a bugling bull and the woods echoed with their calls. A few lone elks bulls & cows were seen. Four or five buffalo were seen at the edge of the hills, (certain count impossible). About 3 miles from there, one lone buffalo bull fed a very long ways off by the roadside & refused to move when we drove within 20 feet of him.

One coyote seen in Pelican Lake Meadows between Pelican Lake & Yellowstone Lake about 8:00 A.M.

The day was clear & cold. Heavy frost in the morning.

The range east of Pelican Valley is badly denuded. Have never seen the hills so bare. Every rock stood out & the hills were practically bare. Considerable grass lay on the floor of the valley. Little springs ~~[illegible]~~ were usually so left over softly dry. Pelican Creek also was almost dry.

Mammoth & Trumpeter Lake
Oct. 7, 1933.

Trip from 1:30 - 6:00 PM. Day sunny and warm.

Two miles west of Floating Island Beaver Pond a Dwarf Weasel (Mustela cicognani) was observed running about in the talus below the road. Its breast & under side of neck were a yellowish buff. Tail black tipped. Appeared to be 6 or 7 inches total length. Movements absolutely silent. From the same point I saw the Trumpeter Lake swan family over and a band by Hell Roaring Creek. Ben Arnold reports that they started flying last Monday, Oct. 2 1933. He says that on the first flight the cygnets could hardly fly to the adjoining lake. Since then they have flown all over the region. The grayness are getting noticeably lighter, but there is still a difference in color.

A coyote seen by Junction Butte.

The water in Trumpeter Lake has receded until it is possible to walk to the island on dry ground. Coyote & elk tracks leaf

Thompson

Mammoth to Pumpelater Lake Oct. 7 1933
out to the island. Mallards, coots
Golden-eyes, Ruddys + am Canad Geese
were seen. The flocks were so thick
an accurate census was impossible
but perhaps 200 ducks were on the
lake.

Numerous elk, antelope and deer
were seen along the return trip
which was too hurried to make
a census.

The Arnolds report seeing 4 wolves
in early December 1932, a few
miles south of the station. The
wolves were at coyote bait and
4 coyotes were also present. Ben
Arnold said the wolves came
~~loafing~~ loping along the trail,
nodes down, taking long
bounds, as a hound travels.
The following evening Mrs. Arnold
visited the bait ground and
reported the same observation.
She said that one of the wolves
came within 4 o feet of her.
Ben thinks they leave the park
for lower territory when heavy
snow comes. He says they cannot
travel in snow as a coyote
does. However, I think this point
is open to question.

Thompson

# Mammoth to Floating Island Lake

Oct. 8, 1933

Day sunny, warm & clear.

Beaver pictures were taken at the lake this afternoon between 2:00 and 3:30 PM when the sun was behind Crescent Hill. One large adult beaver was about 150 feet west of the lake cutting aspen when I arrived. I took 3 pictures of it, during which time it appeared rather unafraid. 9 beavers were seen at the lake. 6 or 7 of them were working out from the upper camp. One beaver in the lake slapped its tail and immediately all the beavers on land rushed down into the water. Here they swam around for about half an hour, pausing now & slapping the water.

Two muskrats at the back of the open bog in the water. When one another would come near they acting wonderful. It sounded somewhat like a cat's growl. They were never seen to use their tails for anything except to slap the water, and of course in swimming as a balanced part of their anatomy.

# Mammoth to Heart Lake

Oct. 9, 1933

Day clear, sunny & cold. A few clouds. No large flocks of any sort seen after leaving Mammoth, except one large black bear on the shores of Heart Lake. Bear tracks numerous. No swans found at the lake although George Baggley page 3 cygnets were seen there in Sept. It is thought that the swans have left for the winter. One beaver & house seen at the southeast bay of the lake. This appears to be the only suitable urban nesting ground in the lake - it is marshy whereas the rest is sandy or rocky beach. Mergansers & geese Mallards and gulls seen on the lake.

Two porcupines seen together by the road in Hayden Valley.

Mammoth to Specimen Ridge

October 11, 1933.

After noon I drove to Gardiner and returned via the old road. 53 ~~[illegible]~~ antelope were counted near Gardiner. 11 Ridhorns were upon the top of the west slope of Mt. Evarts. 38 more antelope were counted out in the Tantalus Lake region, making a total of 91 seen during the afternoon. Buffalo tracks numerous around Specimen Mt. although I saw no buffalo. One coyote seen $\frac{3}{4}$ mile west of Tower Falls ranger station.

Chapmans were at the lower pond taking pictures. They had cut numerous sections of aspen trunks yesterday & thrown them into the pond. Today the beavers stayed in the pond all day eating the bark from these logs. Muskrats and several Canada geese are in the pond also.

It is worth noting here that every night at Mammoth several coyotes howl about the Camp Ground & on the hills. Last night they came down to the stables & howled. 4 to 5 are heard at a time.

Bear - Coyote tracks seen near Lake campfire. Coyote howled about 8:30 AM.

One Bald Eagle seen hovering over Mary's Bay. It kept a stationary position against the wind without horizontal motion for about 5 min

16

E.S.

88

October 16, 1935

## Lake to Thorofare

Leaving Lake at 9:00 AM we rode through ice covered grass, covered from a wet snowfall during the night and heavy frost. Ice on streams and puddles forming everywhere. Day windy and cold but clear until evening when it became cloudy. No game seen ~~the entire~~ until late in the day, except the Canada geese ducks & 12 swans at the Mary's Bay lagoon. Numerous Rocky Mt. Jays, ~~and~~ Chickarees and chipmunks were the constant companions of our trip. Two Ruffed Grouse were seen east of the lake and two at Calin Creek. One Calif. Gull was still flying over the lake. Two moose were seen about 3 miles north of Calin Creek. They were very wild. In spite of there being excellent forage in the meadows no other moose were seen. It is thought they are more constantly in the timber since the beginning of the rut. About 2 miles below Calin Creek we heard what I thought to be an elk bugling. Baggley suggested that it might be a wolf or some other animal. It was a strange call.

Five bull moose & one cow ran through the timber ahead of me about 3 miles above Calfin Creek. Five deer (does) were seen on a sagebrush hills a few miles above Calfin Creek.

Today we left Cabin Creek for Thorofare about 9:00 AM. About 10:00 light snow began to fall & fell intermittently the rest of the day. Toward night the temperature raised to 40° F. and the snow turned to rain. Again the moose meadows were deserted.

Lee Colman & Harry Frishman report a large Grizzly lounging about the Thorofare flats. We have seen no sign of it today.

Left the station at 3:00 PM & made about a 10 mile circuit up Thorofare Creek, back by Bridger Lake & across to the cabin. Ten moose were seen. Of these 2 were this year's calves & two were bulls. Only two of these (2 cows) were seen outside of the park and they were in the protected area around Bridger Lake. All but the bulls were quite tame & stood till we were within about 100 feet of them. One occupied hunter's camp was at Bridger Lake.

Three Buffle Heads, about 100 Barrows Golden-eyes, 3 mallards and 5 American Mergansers were observed on Bridger Lake.

The whole upper Yellowstone and Thorofare valleys are ideal

moose habitat — extensive willow marshes with abundant grass. The region supports a great number of beavers also. Numerous beaver ponds were seen just outside the park boundary in Thorofare valley. They appeared to be occupied. The region is also good summer range.

Cinquefoil is abundant in the grassy meadows. A few sagebrush flats were also encountered. But grass, whether in the forest the marshes or the meadows is much better than in the rest of the park.

Shagley reports that mosquitoes infest the area until the middle of August.

Thompson



Yampa Canyon, Colorado

Oct. 21, 1933

Oct. 22, 1933.

See following small sheets.

# San Rafael Region, Utah

Oct. 27-28, 1933

Oct. 27, 2:00 P.M., we left Ferron. Party of Roger W. Toll, Le Grande Swasie (guide), and I. Direction southeast toward San Rafael Swell, or the Sinbad region. The first 10 miles were through a Sandstone bad land, similar to bad lands around Tuba City. Route then leads up Coal Wash to its head. Terrain rises; endless Zion formations though rarely over 400 to 500 ft. high. Water holes scarce along the creek & water alkaline.

Whole region heavily overgrazed by sheep, cattle & wild horses. Near ~~top~~ head of Coal Wash juniper & pinon country entered. Fine extensive grama grass flats.

Area appealing as a wild frontier but seems unsuitable as a park or monument. It is exceedingly desolate, alkaline, devoid of vegetation, dry and reported very hot in summer & cold in winter.

Outstanding flora:

Pinus ponderosa — few

~~Pinus arizonica~~ ?

Pseudotsuga taxifolia — "

San Rafael, Oct. 27-28 1933

Pinon — abundant higher up
juniper — " " "
Sarcobatus — " lower down
Atriplex canescens — " higher up
" confertifolia — common
Artemisia tridentata — common higher up
red birch — few
single leaf ash — "
narrow leaf cottonwood — along upper stream
broad " " — " " "
Chrysothamnus — abundant
"Russian Thistle" — everywhere, has apparently invaded the range due to over grazing.
milk weed — the same, although not so common
service berry — abundant
curl-leaf mahogany — "
gutierrezia ? — abundant
Ephedra — common
Barberry — "
3 lobed sumac — "
prickly pear cactus — "
Yucca baccata — "
Grama grass, extensive higher up

San Rafael, Oct. 27-28, 1933

Faunal composition:

| | |
|---|---|
| cougar ? | |
| coyote | numerous tracks, one howl. |
| bobcat | commonly reported |
| deer | reported scarce |
| white-tail jack | few |
| cottontail | few |
| porcupine | abundant signs - tracks |
| badger | few holes seen |
| kangaroo rat | reported common |
| antelope ground squirrel, | abundant |

Few birds seen or heard:

| | |
|---|---|
| junco | common |
| pinon jay | " |
| robin | scarce |
| crossbills ? | one flock |
| horned lark | common |
| Golden eagle | 2 |
| raven | 1 |

Swaine says range has deteriorated. He reports that when he was a boy he used to gather white sage and grass in the Sinbad for several ~~head~~ horses. It was only a short task then. Now it would be impossible.

San Rafael Canyon, Utah
Oct. 29, 1933.

This morning I climbed the butte at the head of Sinbad. The entire southwest corner of Utah is here visible. Henry Mts. & La Sallas rise on the east & southeast. Navajo Mt. is reported to be visible from the southern shoulder of the butte, whence I could not go. The view is magnificent.

Coming down from the head of Sinbad via Real Nielson valley, the Horseshoe & down Cain Creek to Little King Canyon, we came through junipers, pinons, Chrysothamnus, and gramma grass all the way. Some Purshia tridentata and Apache Plume was seen. Also some broad leaf mountain mahogany. The course is down hill into a canyon with sides perhaps 700 ft. deep and very picturesque.

The entire area has been overgrazed. Wherever sage brush once grew, only its dead stubs remain.

Eight wild horses were seen. Horse tracks are everywhere, as well as cattle & sheep tracks. The entire area is stock winter

San Rafael Oct. 29, 1933

range & has been since first settled.

Swasey left about 600 wild horses here about 15 yrs. ago when the business became unprofitable. They have since multiplied although no one knows how much. Sheep herders are reported to kill them.

The land is Public Domain and everyone uses it.

Four years ago Swasey saw a mountain sheep about 5 miles southeast of the head of Sinbad. This is the only definite big horn record of which he knows.

No deer nor tracks were seen today.

So far the area is becoming wildly picturesque but hardly seems of national monument caliber, unless we see more spectacular country down along the San Rafael river.

Swasey reports that antelope horns were once found in the region. Certainly the range covered today was suitable antelope range, & there is hundreds of square miles of it.

San Rafael Oct. 29, 1933

No ~~xxxxx~~ mammals seen other than the ~~rabbits~~ Bunnies. Bird life scarce.
Birds seen today:

| | |
|---|---|
| pinon jays | — numerous |
| rock wren | — 1 |
| raven | — 1 |
| horned larks | — 12 |
| juncos | — 2 |
| Audubon's | — 3 |

San Rafael Canyon to Junction with Ferron Creek

October 30, 1933

The gorge was perhaps from 700 — 1100 ft. deep in places, real sandstone, vertical cliffs and a few domes; several large side canyons from the south. All that very picturesque, wild & desolate. ~~Water~~ anywhere in the vicinity is strongly alkaline. Soil & rocks covered with dry alkalai dust. Quicksand alongplant along river course.

Canyon may have cliff dwelling ruins. One probable one was examined superficially. It netted 2 corn cobs, a burnt fragment of earth and one partial arrowhead. The masonry was too disturbed to reveal more

San Rafael Canyon to Ferron. Oct. 30, 1933.

than a probable location. This site was perhaps 1 mile down stream, left hand side, below junction of Sart Wash. Excavation probably justifiable.

U.S. Biological Survey poison signs were recently posted in Fullers valley and above. Poison for coyotes have been distributed for several years in the region. Superv says there is considerable loss of sheep due to coyotes.

The area covered today was everywhere marked by horse, cattle & sheep tracks. A few head of cattle were seen at the upper end of the gorge. The region is almost devoid of visible animal life. Signs seen:

coyote tracks — common
porcupine sans — few
bobcat tracks — one
packrat nests — few
chipmunks — 2 unidentifiable

Birds, very scarce; those seen:

gnatcatchers — one flock
juncos — common
chickadees — heard twice
ravens — 9
redtail hawk — 1

San Rafael to Ferron Wash, Oct. 30, 1933.
Flora of the canyon floor similar to that seen throughout the 4 days riding. Characteristic forms:

| | | |
|---|---|---|
| Sapargeria | — | common |
| Chrysothamnus sp. sp. | — | abundant |
| Amelanchier | — | abundant |
| Juniperus | — | " |
| Piñon | — | common |
| cottonwood | — | " |
| Yucca baccata | — | few |
| Ephedra | — | common |
| Single leaf ash | — | abundant |
| Atriplex canescens | — | " |
| Salsolatus | — | scarce |
| Three lobed sumac | — | abundant |
| Prickly pair cactus | — | common |
| Pincushion " | — | few |
| Clematus | — | common |
| Grama grass | — | " |
| Wheat grass | — | scarce |
| grass (unidentified) | — | Tence high |
| White sage | — | scarce |
| milk weed | — | few |
| Perezia tridentata | — | common |
| willow groves | — | common |
| gutierrezia | — | common |
| Russian thistle | — | everywhere |
| Rosa | — | scarce |
| tamarisk | — | " |
| sage brush | — | " |

San Rafael to Junction Ferron Wash
Oct. 30, 1933.

castilleja — scarce
Rocky Mt. bee plant — common
Yellow pine — few high up
Douglas fir? — scarce
pinnate leaf, perennial unidentified — common.

# B. H. Thompson
## 1929-1957

## Journal

1934 Arizona: Grand Canyon N. P.
Petrified Forest N. M.
New Mexico: Bandelier N. M.
Carlsbad Caverns N. P.
Texas: Big Bend
Washington: Mount Olympus
Montana: Redrock Lakes N.W. R.

# Kaibab Deer Census 1934

| Date | Place | Total |
|---|---|---|
| 2/27/34 | Kane | 101 |
| 2/28/34 | Tater Canyon region | 182 |
| 2/29/34 | " " to South Canyon | 39 |
| 2/30/34 | South Canyon | 60 |
| 3/6/34 | White Pockets to Table Rock | 473 |
| 3/7/34 | Table Rock to Willow Spring | 365 |
| 3/8/34 | Rock Canyon & Slide Canyon | 296 |
| 3/9/34 | Jump Up | 470 |
| 3/10/34 | White Pockets & Pine Hollow | 1007 |
| 3/11/34 | Sowats, north & west | 145 |
| 3/12/34 | Sowats, south & east | 295 |
| | Total | 3433 |
| | West Side 3051 | |
| | East Side 382 | |

Kane Canyon, North & South

Feb. 27, 1934.

Total deer count for the day ~~78~~ 101.

The deer are located as they were last year, that is, within the first mile of the canyons which cut into the plateau. They seem to concentrate within this narrow strip of winter range regardless of weather conditions. This winter there has been practically no snow. A light snow, perhaps 6" fell on top of the plateau on Feb. 23-24. No snow lies around Kane, and only a few light patches, perhaps 1" deep, upon top of Little Mountain. Yet the deer are in the same locality where we saw them last year.

The range appears to be supporting more cattle this year than last. The Forest Service, however, is fencing the entire forest, which will make it possible to regulate the number of stock utilizing the forest.

Cowania is showing utilization in spots on the ridges, particularly in the sunny open places relatively free from juniper and pinon. But only certain plants show browsing, although a number of deer had concentrated at these & skirted others nearby.

Thompson

Kane, North & South.

Feb. 27, 1934

Ephedra viridis shows too heavy utilization by cattle probably, on these sandy ridges. Sagebrush shows hardly any browsing. Cowania and Juniperus which were once stripped today overbrowsing show remarkable recovery in an abundance of new shoots growing from the leafless parts.

I see little difference in the range this year, compared with last except for the normal growth of last year and a slight utilization generally. This east side range still appears to me as capable of supporting many more deer than it does at present, provided cattle are limited to the permits given.

Last night I heard several coyotes howl out on the plain toward Marble Canyon. Warren Hamilton saw one coyote north of Kane by a freshly killed buck.

Thompson

Tater Canyon Region

Feb. 28, 1934

One jack-rabbit
One cotton-tail

seen today. Murray saw a bobcat's tracks. Tracks of 3 coyotes seen by Hamilton. Billy Crosby, resident here, interjects that cats are more abundant around South Canyon. He also says coyotes seem to travel in a definite route through the valley, through the hills, & back into the valley, taking several days for the circuit.

The range inspected today at the head of and around Tater Canyon has more Lovania than I've seen anywhere except in the thickest of the west side. It was terribly stripped years ago, but shows unusual recovery — that is, in most cases, the whole plant is now covered with new shoots from a few inches to a foot long. Many plants did not recover. Much sagebrush was also killed outright then. Sage is still stubby but in good condition.

Numbers of cattle are found out on nearly all the points. Bob Parker says they are not permitted there & will be removed when the fence is completed.

The range shows considerable utilization.

Thompson

Tater Canyon & Region

Feb. 28, 1934

Birds seen:

1 golden eagle
1 prairie falcon
numerous ravens
1 canyon wren
several chickadees,
numerous horned larks
" juncos

---

Tater Canyon to South Canyon

~~Feb. 27~~ March 1, 1934

Eight coyote tracks seen enroute today. Three cottontails likewise.

Range in excellent recovery condition but ~~so~~ not a great quantity of grass. In some of the wash beds grass was knee high & luxuriant in growth.

Cowania, juniper & sage recovering remarkably.

Deer tracks not numerous. It seems to us that the range is not nearly normally stocked with deer.

South Canyon

~~Feb. 30 1934~~ March. 2, 1934

Nine coyote tracks seen today and 2 cottontails, 1 jack rabbit.

Thompson

South Canyon

Mar. 2. ~~Feb. 30, 1934~~

The range ~~covered~~ seen today is densely covered with juniper, pinon, Cowania, Purshia, yucca glauca?, and in spots sagebrush & chrysothamnus. The canyons are filled with gamble oaks. Cowania and Purshia are almost entirely removed. The region has been closed to domestic stock for 8 years. We saw a few horse tracks however, & a few cow tracks. The range south of Sapolalk Canyon is the best and it shows that it was hard hit when deer were most abundant.

Deer tracks were numerous everywhere. Our census of 60 deer for the day must be a very small percentage of the deer actually present. Browse plants, however, showed no sign of browsing. The east side range, particularly the South Canyon area is certainly not stocked with deer to capacity. I believe that the range is supporting only a small percentage of the deer which it is capable of supporting.

DWM p 5017

# Slide

March 6, 1934

Yesterday I rode from Kanab to Ryan across the sagebrush flat. The lower part of the valley is covered mostly with Atriplex confertifolia. As the valley rises Artemisia tridentata predominates. The region is without grass except in a few localities. Three jackrabbits and several coyote tracks were seen. Signs of one flock of domestic sheep in the region presently were observed.

Today I rode from Ryan to Slide and then over into the White Pocket area. In general, the Cowania has been utilized just as heavily this winter as last, in spite of the fact that the winter is unusually mild (there is no snow where we rode). Such, at least, is my impression from the days ride. To be specific, on the more heavily used ridges, the current growth on Cowania has been browsed to stubs 1" long in many instances; the average is perhaps between 2" - 3" of new growth left. And the range looks still deplorably over-browsed.

OLMPSON

Table Rock to Willow Canyon to Slide

Mar. 7, 1934.

The points covered today have been hit as hard as anything on the winter range. Sagebrush & Copania are only stubs. There is new growth put out every year, but it is eaten almost to the bare each year. It did not look to me as though it were recovering fast enough to save a large percentage of the plants from dying. Deer & cattle tracks were everywhere. Forsellesia, Ephedra, Fallugia & Cowania are all heavily browsed. Sagebrush is recovering more than the others.

The day was warm with a cold wind. Deer are fairly well scattered, but still concentrated on the points with a higher reach on the upper end of the range.

Slide & Horse Spring Canyons

Mar. 8, 1934

Down the north side of Slide Canyon the range was the same as yesterday. Slide Spring is a good trickle, cascading over 200 ft. down to the bottom of the canyon. Its water is slightly gyp flavored. Perhaps a 2" pipe could carry it. Horse Spring is barely more than a seep.

Five deer were seen down in the bottom of Slide Canyon about half a mile above the spring. These were the deepest

down in any of these canyons I have yet observed. Cattle range in Slide and Horse Spring west of the fence at the spring. West of this fence is all year range. Poa pratensis is plentiful down in the region of the springs.

Alfilaria is showing green all over the winter range. Some grass is green also.

The long ridges just south of Slide Canyon & west of Jump-up divide, are about the longest Coleania stretches in this part of the winter range. They have very little juniper and are in general open for miles. Here the browsing damage has been extreme. The recovery is very slow. Most of the Cowania shoots are eaten to stubs 1" long. This was decidedly the most heavily utilized area I've seen to date.

Four jackrabbits seen today.

A Marsh Hawk was frightened from a jackrabbit carcass. This is the first instance I know of where this hawk has been known to eat carrion. The carcass was perhaps 3 days old. No mark upon it gave any clue to its death. The hawk had just torn into the shoulder region.

Simpson

Jump Up March 9, 1934.

The ride today covered the Jump Up peninsula. I rode west from the cabin to Kanab Creek and covered the area for perhaps 3 1/2 miles south. Deer were mainly scattered from about the middle of the peninsula to Jump up Canyon. Four were seen, & tracks were seen down on the points to Kanab Creek. The portion which I saw showed an improved range as compared to last year. Cowania shoots were from 4" to 6" long and in many cases appeared to be entombed. Ephedra was improved everywhere, & fairly abundant. Artemisia is in excellent condition.

Perhaps the reason for this range improvement is in the fact that deer are scattered over the winter range this year and are not concentrated as they were last year.

I saw 2 coyotes down near Kanab Creek. They were together. Coyote tracks were reported common by the other members of the party.

A Bald Eagle was reported seen.

Compson



White Pockets & Pine Hollow

Mar. 10, 1934.

The long points east of Jump Up, for perhaps 3 miles east, are extensive Carmelia ridges. The Cowania has been & still is heavily used. Most of the stubs or shoots were browsed close to the plant. For perhaps 3 miles west of the Ryan-Senata road was intermediate range area. Here Cowania is covered with shoots from 8"-12" generally. Juniper & Pinion predominate here.

It is my opinion that the ridges within the further range, covered today, are still too heavily utilized to allow recovery.

Three coyotes, 1 cat track, & 2 Golden Eagles seen this afternoon. Last night coyotes howled just east of Jump Up.

One dead porcupine, eaten from the belly was found with a dead Albert squirrel. We could not explain it. The squirrel was within 1 foot of the porcupine but nothing had eaten the squirrel.

20.TTP5017

Sowats

March 11, 1934

This morning we moved camp to Sowats. Roads were clear of snow so that we could drive cars all the way. There is a new cabin at Sowats.

In the afternoon Shumacher and I rode the points north & west of the cabin. The range appears just about as it did last year. Reconn is too slow.

Shumacher agreed privately with me that the range is still being too heavily utilized, and that further reductions in stock & game would be desirable. He outlined a plan of his whereby the west side winter range points might be fenced against deer & domestic stock, leaving lanes down into the sandrocks (such as the Nail Trail) where animals might go in case of severe winter. Otherwise they might pile up against the fence occasioning range damage and perhaps severe losses.

Thompson



Sonata

March 12, 1934

Today the ride took me from head of the Hail Trail to Little Spdalle, Indian Hollow & Rice Hollow. The range shows heavy current utilization. Particularly near the water hole in Rice Hollow, Cliffrose is utterly stripped. In the areas of worst utilization, Russian Thistle covers the ground. This is its first appearance on the range, so far as I have noticed, but it indicates what can take place if further range abuse occurs.

In summary: it is my opinion that game must be reduced further; that a reduction of domestic stock would be desirable if it can be affected; that the range is being held in an unproductive state.

March 13-14, 1934 enroute to South Rim Grand Canyon. March 15th, wrote Flagstaff report and answered accumulated mail.

Thompson

Grand Canyon

March 16, 1934.

Today, Brooks and I drove over much of the area within the new fence which circles the village site, running from the south boundary east about 5 miles from the village and west about an equal distance. This will totally exclude domestic stock from an area (I estimate it to be) about 45 sq. miles.

Brooks has dug 8 waterholes and plans to do about 8 more. These are so far within the fence. He contemplates constructing some outside. Water run-off is uncertain & usually slight in this region. Lack of trampling within these ponds may allow water to seep away for the first few years.

There are now four factors to induce deer to remain in the park, South Rim:
1. waterholes in an arid region.
2. improving & fenced range.
3. shutting outside & protection inside.
4. salting

Locally (at the village) there is feeding of hay & grain, and the remnant of the tame herd imported & rearing its fawns each year in the vicinity.

Thompson

440

Grand Canyon

March 17, 1934.

Today I drove over the Grand View region, down into the Tusayan Forest afoot 10 miles on the old Cameron road & the old Flagstaff road, as well as around the ^grazing^ and down to Bennie ranch. This gave a good cross section of the worst grazing area.

Within the park, near Grand View, the range is in deplorable condition. Gambel oak is a mass of dead stubs. Cowania killed outright in some places, left stubby in others, etc.; showing all degrees of utilization.

Within the national forest, the same condition exists for several miles south of the park boundary. Logging is recent & selective here, but it has not obliterated the signs of over-grazing.

Further south, a good grass country is entered. Grass grows abundantly under the yellow pines.

Thompson



Grand Canyon
Horse Thief Tank & Pasture Wash.
March 18-19, 1934.

The 18th, Art Brown & I went to Horse Thief Tank in the Hermit Basin drainage. Seven deer ran out of the tank as we approached. Burro tracks are abundant all around the Hermit Basin vicinity. Brown intends to shoot them.

Browse, particularly Gamble oak & Cowania, show all along this divide that at some time in the past they have been heavily over-browsed. Many dead stubs remain. The range is not a big browse producer. Dripping Springs canyon on the west side of Hermit was also visited. Deer tracks were common in the area.

The 19th, Art & I drove to Pasture Wash. By the ranger station, perhaps ¼ mile north of it, is the new antelope paddock, constructed of woven wire & iron posts, enclosing 2-3 acres with water troughs. This paddock lies within the newly fenced horse pasture which is about 2 miles long by ¾ mile wide. It is planned to introduce antelope kids in the stockade; to release them when they are mature. Antelope are not far from here — in head of Cataract so that it is felt that they will adapt themselves to the Pasture Wash region.

Pasture Wash continued.

March 19 1934

Range within the park appears to be good antelope range — sagebrush flats in comparatively open juniper-pinon country with good grama grass stand. The most often country known as in the forest just south of the park. It seems a gamble to me whether antelope will stay within the park unless hopelessly domesticated. However, I think the experiment worth trying — it may work.

A new water hole has been constructed about a mile north of Pasture Wash ranger station. Up at Bass's cisterns new galvanized iron troughs have been placed. The cisterns are blasted out of solid limestone & are too vertically sided to be used other than by pumping. It is planned to pump water periodically into the troughs. Such course strikes me as futile.

Cowania, Ephedra, & Artemisia, juniper & pinon are in normal growth about Bass cisterns. They show no browsing. All ages & sizes of Cowania repro. are to be found, but without exception, the young plants were deer browsed, the shoots showing why

Thompson

Pasture Wash continued

March 19, 1934.

there is no repro. evident on the Kaibab winter range. The stand of Cowania & other growth is exactly now what the Kaibab west side range must have been at one time and the revelation is worth seeing. Deer could not possibly be counted in this heavy growth. When the Kaibab range returns there can be no count there, nor will it be necessary.

March 20th to Petrified Forest.

Petrified Forest

March 21, 1934.

Today, Supt. Chas. J. Smith has taken me along the south end part of the west fence. The fence is just recently completed. It is 4 barbed wires, juniper posts 1 rod spaced, lower wire off ground 16" to 18" above ground. I think this is a little low but it will probably not impede antelope movements very much.

Only a few domestic cattle are still within the fence. Grass is well scattered, much grama in seed, but looks as though a few years

Thompson

Petrified Forest

March 21, 1934.

protection would greatly improve it— ie. thicker, closer & taller growth. Erosion gullies are small but numerous. Grass cover may stop the erosion.

Antelope are reported seen commonly within the monument along approach roads just outside and along the west side. Range is just barely perceptibly improved inside over that currently used outside.

Water holes are to be provided when funds are available. These will lie south of the administration center several miles. One to be near along the west boundary, perhaps, and one just east of the road. Permanent water is to be had just west of the monument — water hole.

Prairie dogs may be in the monument although data is indefinite.

MP 97A

# Bandelier Nat'l. Monument

March 28, 1934.

Last night I came out with Custodian Evansteed from Santa Fe. We drove in over the new highway which is being built down into Frijoles Canyon.

Evansteed wants to fence the south and east sides of the monument to exclude trespass stock. He reports that turkeys have been commonly seen along the approach road near the south rim of the canyon, but have not been seen down in Frijoles this winter. The winter is so mild that there has been no necessity for their seeking lower terrain.

This morning, Evansteed, Lyle Bennett & I hiked into the north section of the monument, as far as Alamo canyon, ~~—~~ up Alamo about 3 miles, across toward Frijoles, striking the trail near the top of Frijoles. This is an old Forest Service trail.

An open, picturesque Ponderosa pine forest covers the top of the mesa with a mixed understory of pinon, juniper (scopulorum, utahensis, & possibly occidentalis), Cowania, Quercus of various species, Cercocarpus abundantly, cacti of cholla & prickly pear varieties, Amelanchier & ribbons along streams,

Thompson

Bandelier

March 28, 1934

and an excellent ground cover of grama grass somewhat utilized by ~~the~~ cattle & horses, and an abundance of mountain Muhlenbergia — a tall very coarse bunch grass of little forage value. Cattle & horse trails are common in the forest and the browse shows heavy grazing a few years ago. Much of it still looks stubby although there has been a marked recovery. Fencing it seems desirable to me.

Up along Alamo canyon & across to Frijoles, perhaps 2 miles west of the telephone line, there is a solid mat of Ponderosa Pine reproduction, ranging in height from 3' to 15'.

Deer (Odocoileus hemionus macrotis) tracks are numerous throughout the forest. I jumped 3 deer in a bunch about half way to Alamo.

One turkey feather was also picked up. It was fresh & clean, indicating recent passage of turkeys through the forest. This was along phone line.

A duck hawk was nesting in a hole well up in the south cliff of Alamo canyon. One of the birds flew up & down the canyon calling repeatedly.

Thompson

Bandelier

March 28, 1934.

Once it flew to the supposed nest site and it sounded as though two birds were making a sort of churring noise together. Possibly the other was on the nest.

Three cottontails were seen during the day. Several ravens, red-shafted flickers and numerous passerines not recorded.

Few porcupine scats were seen. Fry, the concessioner, has poisoned & killed them at every opportunity in past years. They cannot yet be abundant in the monument.

A few coyote tracks were seen, but not many. Perhaps twice during the day. Predatory animal control is practiced in the Santa Fe National Forest surrounding the monument, and there are numerous private grants of great extent adjacent & near to the monument. Cougars have been killed in the forest for years, according to local reports. They are now probably scarce.

No water was flowing in Alamo, and there was no sign of beaver habitation there. I doubt that beavers are ever more than sporadic here. There is a dense stand of douglas fir in Alamo.

Thompson

Bandelier

March 28, 1934.

Bighorns may have been once present. None have been heard of within the region in many years. There is not sufficient territory within the monument to attempt re-introducing them at this time.

Fry told us upon our return that the badly over-grazed portion of the monument lay south of Alamo canyon where we were unable to go.

The mesa top is dotted with mounds and chippings & pottery sherds.

Evansford is interested in wild life and is going to try to get a survey made within the monument if he can get a trained person to do it.

There seems to be no particular game management plan to institute there at present, other than to have a patrol the area & give adequate protection. As the situation becomes better known, some cooperative steps with the Forest Service & game department may be worked out for a larger game production scheme.

Thompson

Carlsbad April 2, 1934

From Carlsbad, up Rocky Arroyo, to Dark Canyon watershed, over Queens Mesa to Lincoln Forest fire look-out.

Practically all of the mesa country lying north of the Cavern is unsuitable for park purposes. It is utilized by cattle and goats and is of no outstanding scenic value. Grass & browse ranges are generally good, except in spots near ranches, water-holes or camps, where overgrazing is in some cases severe. Particularly is it bad around goat ranches.

Characteristic vegetation:

Pinus edulus, Juniperus monosperma, J. pachyphloia, several other junipers unidentified by us, Pinus ponderosa on higher or protected sites, great variety of oaks, Cercocarpus, Canothus, yucca, Agaves, ephedra, etc.

This region appears to be serving its maximum utility at present and should not be considered for park purposes.

Ranger Perry Comins accompanied me.

ompson

Carlsbad April 3, 1934.

McKittrick Canyon. Accompanied by Ranger & Mrs. Perry Lewis of Carlsbad.

Most of McKittrick Canyon is privately owned. Ben McComb has very picturesque old home about a mile out from foot of Guadalupes. Mr. Pratt from Houston, Texas has the second home, up in the canyon. He uses this for summer home, riding & general recreation. His house is picturesque & substantial. The third holding up the canyon is less developed but holds the elk above a fence running across the canyon. Each place is fenced against the public.

The elk, introduced from somewhere in Montana or Wyoming, are now about 60 in number. They tend to remain in McKittrick canyon, hanging near the streambed, eating, rubbing and trampling the vegetation along the stream course. They act like true exotics, ill adapted to their present environment. We saw two elk, but tracks & sign of more were in evidence all day. I feel that this region cannot support but few elk, & would be better without them at all.

The stream was stocked with an abundance of rainbow trout, ranging

Thompson

McKittrick Canyon April 3, 1934

from 4 or 5 inches to a foot long. Pools are numerous & fish foods seem to be abundant, particularly Caddis fly larvae.

Perry reported: bears few; deer common (Odocoileus H. canus Merriam) and we saw numerous signs. Bighorn or tracks were not seen, but bighorn are still thought by local residents to inhabit the canyon walls. One coyote track seen.

McKittrick is very scenic; a delightful camping & hiking area with an abundance of flora of many varieties (see Bailey's "Flora of Carlsbad Caverns").

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Big Bend of Rio Grande Texas

April 5-6, 1934

April 5th about 1:15 PM I left Alpine for Big Bend in company with the James Conner pres. of Alpine Chamber of Commerce, Joe Moore local resident for many years, Frank McCullam, and John Hafmen a "water witch" of many years in Alpine & vicinity.

Enroute, we discussed wild life of the region, and the following is the gist of the conversation:

Peccaries (species not sure) are still common in the lechuguilla-covered foothills of the Chisos & surrounding mts. Reported to eat

Odocoileus couesi (Ariz. white-tailed deer) probably finds its eastern limits in Chiso

Ovis mexicanus, Mex. Bighorn (Gaye Bailey) have been killed on north side of Chisos & came into Santa Helena canyon from Mex. side. Probably very rare, if no extinct in the region.

THOMPSON

Big Bend April 5-6, 1934

Agave lechuguilla.
Mule deer (O. h. canus) commonly hunted in Chisos region
"Fan-tailed deer" (O. texanus) also commonly hunted in Chisos.
Pronghorn & Bighorn no one seemed to know anything about, although I think it probable that pronghorn were here in former days because the range looks suitable, but probably not down in the proposed park proper.
In the evening, bats began flying about over "Hectors" place in mouth of Chisos. I took these to be the Big Brown Bat (Eptesicus f. fuscus). Smaller bats were common at dusk also, although I could not identify them.
Black bears (Euarctos americanus) are reported still found in Chisos.
Mexican raccoon (Procyon lotor mexicanus) reported common along Rio Grande
Texan coconistle (B. a. flavus) also common.
Skunks (M. mesomelas varians and Spilogale leucoparia) common. The Hog-nosed skunk (Conepatus mesoleucus mearnsi) must also be present, although no one seemed to know.
Badgers (Taxidea taxus berlandieri) reported present but not common.

Thompson

Big Bend of Rio Grande April 5-6, 1934

Coyotes ((C. l. texensis or C. microdon) possibly both species, are common and are of course hunted. One (appeared like C. microdon to me) was chained by a gas station perhaps 30 miles south of the Chisos.

Gray fox (Urocyon cinereoargenteus scottii)? common in the region. Three were confined in a pen at the same gas station.

Gray or lobo wolf (Canis mexicanus nubilus) was once common in the region. It is several years since any have been reported, according to my information. Most of them were killed prior to 1920.

Swift fox (Kit fox (probably V. macrotis neomexicana)) reported to be in the region. No book which I have seen however, gives its range in Big Bend, although Bailey places it about as near as Presidio.

Bobcats (sp.?) are reported common.

Cougars (Felis oregonensis aztecа) have been hunted & killed in the region since white man first came. They are probably very scarce now.

No one seemed to know anything about ocelots or jaguars.

Beavers (castor canadensis mexicanus) reported along the Rio Grande.

Jackrabbits (Lepus californicus texianus)

Ammospermophilus interpres, Texas antelope
squirrel, seen along Rio Grande.

Armadillos probably not present.

Neotoma micropus, Baird woodrat in desert
" mexicana Mex. " in Chisos.

Thompson

Big Bend/Rio Grande

Apr. 5-6, 1934.

were frequently seen in the desert and mountains.

Cottontails (Sylvilagus robustus,) Davis Mountains Cottontails common in the Chisos higher up.

(S. audubonii minor) Little Cottontail in the desert & foothills. Several seen.

This area has been grazed by domestic stock for perhaps 50-60 years. It is over-grazed. Hardly a blade of grass was to be found anywhere around the Chisos near Hector's camp. Grama grass, closely cropped, was found near the entrance of the mts. Mules, cows, and horses were seen eating the brittle leaves of oaks (sp.?) around Hector's place, and the stock was poor in flesh.

April 7, - 8, 1934.

Leaving Alpine about 10:30 A.M. Dr. T. D. Steiger, Biol. Dept., Sul Ross Teachers' College, Alpine, and Dr. Benj. F. Berkeley accompanied me to Berkeley's cabin on the banks of the Rio Grande near Boquillos. We returned about 11:30 PM, Apr. 8th.

Thompson

Big Bend Rio Grande April 7-8, 1934.

We drove down by way of the eastern-most road to Boquillos & returned by the one which ~~passes~~ just east of the Chisos mts. On the 8th Steger & I hiked over to the mouth of ~~the Chisos~~ Boquillos canyon, part way up on the south side mts. & back to Boquillos by the river.

Birds seen: ~~& reported:~~

Blue heron (Ardea herodias ——)

American Merganser (Mergus merganser americanus) a flock on river.

3. Turkey vulture (Cathartes aura septentrionalis) common.
4. Black Vulture? (Coragyps a. atratus) two.
5. Red-tailed hawk (Buteo borealis ——) few.
6. Golden Eagle (Aquila chrysaetos canadensis) several.
7. Marsh Hawk (Circus hudsonius) common.
8. Sparrow Hawk (Falco sparverius) common.
9. Prairie Falcon (Falco mexicanus) one
10. Ariz. Scaled Quail (Callipepla squamata pallida) abundant in desert.
11. Mearns Quail (Cyrtonyx montezumae mearnsi) reported, a few still up in Chisos.
12. Spotted Sandpiper (Actitis macularia) few seen along river.
13. Killdeer (Aegialitis vocifera) few along river and near springs.
14. Western mourning dove (Zenaidura macroura marginella) common

Black Phoebe (Sayornis nigricans) one seen
at river.
Olive-sided Flycatcher (Contopus borealis)
heard along river.

Thompson

Big Bend Rio Grande April 7-8, 1934.

15. Eastern White-winged dove (Melopelia a. asiatica) few seen along river.
14. Band-tailed pigeon (Columba fasciata) said to be fair in Chisos.
15. Hummingbirds are said to be numerous. We saw none.
16. Cassin's Kingbird (Tyrannus vociferans) common
17. Bank Swallows (Riparia riparia) common along river.
18. Woodhouse jay (Aphelocoma californica woodhousei) common in Chisos.
19. American Raven (Corvus corax sinuatus) common in desert.
20. Cactus wren (Heleodytes brunneicapillus couesi) common along Rio Grande.
21. Canyon wren (Catherpes mexicanus albifrons) common along Boquillas Canyon.
22. Marsh wren (Cistothorus sp) common in reeds along Rio Grande.
23. Western mockingbird (Mimus polyglottos leucopterus) common
24. Thrashers, probably Curve-billed (Toxostoma curvirostre) common along river.
25. Western robin (Turdus migratorius ~~propinquus~~ propinquus) few.
26. Chestnut-backed bluebird (Sialia mexicana bairdi) common
27. Mt. Bluebird (Sialia currucoides) few seen in Chisos.

Thompson

Big Bend Rio Grande April 7-8, 1934

28. Pyrrhuloxia (sp?) common along Rio Grande.
29. White-rumped shrike (Lanius ludovicianus ~~migrans~~ excubitoides) common.
30. Juncos, English sparrows, sparrows.

There were many birds which I could not identify by song and did not see sufficiently for good diagnostic characteristics.

Two turtles were seen swimming in the river. They may have been the Sonoran Mud Turtle (Kinosternon sonoriense)

A large bull snake (Pituophis sp.) was found along the river. We threw it into the water and it could swim about 3 times as fast as it can crawl. It was brightly colored as though it had recently shed.

Characteristic vegetation of the region:

1. Bulbulis dactiloides, Buffalo grass, in a few spring areas between Alpine & the Big Bend, but none seen in Big Bend area.
2. Sparse scattering of grass, some grama, in area itself, but most has been grazed to death.
3. Agave lechuguilla very abundant throughout the region, but thickest in foothills.
4. A. wislizeni in foothills & Chisos.
5. Agave sp. A thin one with reddish edges ~~of~~ the leaves; very slender leaves, about as high as lechuguilla. Steiger did not know the name & he had no way of identification.

Thompson



Big Bend Rio Grande

Apr. 7-8, 1934

6. Yucca glauca
7. " baccata
8. Covillea glutinosa, Creosote bush
9. Ephedra, at least 2 species, probably torreyana and nevadensis and possibly a third, antisyphilitica.
10. Prosopsis glandulosa, mesquite, common.
11. Fallugia paradoxa, Apache plume, common.
12. Celtis ~~occidentalis~~, hackleberry, and very probably C. pallida.
13. Leptarrhena sp. Saw. (2 species present).
14. Opuntia ~~prickly pear~~, several species
15. Mamillaria, pincushion " "
Echinocactus & Echinocereus, " "
Peniocereus (the "night-blooming Cereus") is reported present.
15. Fouquiera splendens, Ocotillo, abundant.
16. Diospyros texana, Mexican persimmon common
17. Odostemon, probably fremonti, Saw.
18. Chilopsis saligna, desertwillow common
19. Candelaria or rubber plant. Can't find this in Coulter, but Steiger calls it Candelaria and says Mexicans make a gum ~~from~~ or wax from it.
20. Chrysothamnus, common

In the Chisos:

21. Pinus ponderosa in Chisos
22. " chihuahuana, reported

Thompson

Big Bend Rio Grande

Apr. 7-9, 1934.

23. Pinus edulis, pinon.
24. Pseudotsuga taxifolia
25. Juniperus occidentalis, reported
26. " " monosperma, reported.
27. J. pachyphloea, Alligator bark juniper
28. J. flaccida, Weeping juniper. So far as I can ascertain, this is found only in the Chisos mts. for Texas.
29. Quercus many species. Miller, a botanist at the U. of Texas says there are 8 species new to U.S. found here. He had not published yet, but has worked on flora of the region.
30. Acer grandidentatum, maple.
31. Arbutus xalapensis, madrone.
32. Prunus serotina or salicifolia or both. The latter is a Mex. form extending into mts. of western & southern Texas.
33. Cercocarpus parvifolius & possibly paucidentatus.

Of course, there is much more, but these are representative.

Thompson Mount Olympus

April 22, 1934.

This afternoon I attended a meeting in Forks of Izaak Waltonians, local game protectors, foresters, one member of the state game commission. Resolutions were proposed by the I.W. league, local chapter and unanimously passed. As near as I can recall they expressed the sentiment of the community, & were in the main as follows:

1. Bounty system should be restored on cougars & other predators. Note: there was no faith in the govt. hunters. Everyone keeps a pack of trained cougar hounds. They like cougar hunting but also want the bounty to help defray expense of hounds. Approx. 32-34 cougars supposedly killed on the peninsula each year. Black bears should be killed as predators.
2. The Olympic Natl. Monument should not be any larger than at present. Note: this also expresses sentiment generally. The monument is not favored by these people here.
3. Various lengthy proposals to produce better Steelhead fishing by larger rearing ponds & more trout plants.
4. Best game management books should be brought by county & taught in public schools.

OLYMPS017

# Mount Olympus

April 23, 1934.

## Hoh River

Today Mr. O. J. Marie & I drove from Forks to the CCC camp which is about 10 miles up the Hoh River. From there, we hiked up to South Fork of Hoh and several miles up the south fork. We were perhaps, within 5 miles of east side of Mt. Olympus Natl. Monument.

We talked with a Mrs. ~~Pickard~~ Richmond who has lived all her life on the Hoh. Her points were fairly expressive of local sentiment.

1. The monument should be kept small enough that roads would be unnecessary and it could be hiked across.
2. Predators should be exterminated.
3. Elk & deer should be hunted in order to keep the range from being over-grazed.
4. Big concessionaires should forever be kept out. Let the locals take care of public.
5. Let the peninsula remain a frontier as it is so that these people will in no way have to modify the way they have lived for 40 years.
6. Any animal which is not seen, such as fur bearers & predators, should be trapped & killed inside or outside of the monument.
7. Bears are predacious & should be killed.

*Hamus biennalis pacificus*

OMPS017

Hoh River Apr. 23, 1934.

The forest which covers this side of Olympics is mainly Pseudotsuga taxifolia, Picea sitchensis, Abies grandis, Thuya sp., Tsuga sp., Alders and maples, with an understory of Salmonberry, 2 species of huckleberry, Devil's Club, Equisetum, & vine maple, and a ground covering of various mosses, oxalis, bracken and sword ferns and a smaller variety locally called "Elk Fern" (considered very palatable to elk), Salal, Oplopanax, Thimbleberry and much coniferous reproduction. Everything is soon covered with green growth.

Winter wrens are the most persistent bird in the forest.

Two American Mergansers seen in Hoh.
Water Ouzels seen twice
Crows common
Robin common
Varied Thrush "

Aplodontia holes seen a few times.
Deer tracks generally distributed, but nowhere abundant.
Elk tracks common everywhere above the forks of the river. A band of 10 cows & 2 calves was seen about 6 miles up South Fork of Hoh. Elk sign and browsing on vine maple & Salmonberry indicate rather heavy usage along streams in some areas. The Hoh is

Thompson Hoh River April. 23, 1934.

reportedly the most heavily utilized by elk. Mrs. Richmond said she had seen a band of approx. 75 just above her place recently. Bear tracks seen once.

One cougar track followed along trail for over a mile.

Otter, bobcats, mink, marten are all trapped, and fisher are occasionally caught. Myrke saw a fisher track shortly below Mosquito Creek on Bogachiel River. Wolves are probably gone entirely. Coyotes & foxes are probably not in this part of the peninsula.

Grouse heard 3 times during day.

Bogachiel River

April 24, 1934.

Trip from Crippin's place to Guard Station, about 8 miles. Vegetation much the same as on the lower Hoh. Elk browsing on Salmonberry & Vine maple became noticeable about last 2-3 miles of trail. Elk tracks common from about 2 miles above Crippins. Deer tracks fairly common, though never numerous.

Bear sign seen twice.

Bobcat & cougar tracks once each.

Winter wren is still about only bird heard in forest. Occasional Varied Thrush & Crow. Wesaw 2 Am. Mergansers on river.

ompson

Bogachiel Guard Station to Calawah River + Return. April 25, 1934.

Murie picked up 5 bobcat and 1 cougar droppings today. We saw no tracks, however elk tracks numerous all the way. Browse abundant, especially vine maple, huckleberry (most of this), and some salmon berry. Deer tracks seen only a few times. There was no sign of over-browsing which I could detect, although numerous signs of browsing.

A salmon, perhaps 2 ft. long was playing in Calawah River by trail crossing.

Certainly there is no scarcity of browse in the woods at present, but this has been a mild winter with early spring. It is reported that snow is prodigiously found all over region we have covered this time of year. During dead of winter, I imagine food in the forest would be scarce for deer + elk. It is at such times that the reported starvation + over-browsing must take place.

As one proceeds up rivers, notably the Hoh, underbrush thins out + disappears. Old timers say it has been killed out by elk. There is no remnant of it, but then wood rots rapidly in this damp forest. The question is: has this been done by elk, or is it a normal transition from thicket to open forest?

Topia curvirostra sitkensis

Thompson

Bogachiel Guard Station to Hyack & Return
April 26, 1934.

It is about 11½ miles from Bogachiel G.S. to Hyack. Trail leads up river and up North Fork. All the way (and Mineral reports it for about 3 miles beyond) there is a dense undergrowth of huckleberry, Salmonberry, vine maple, ferns (both sword and "elk brake" and some bracken) salal and oxalis as well as others of less forage value. There were signs of elk browsing but no over-browsing.

A band of perhaps 10–12 elk was flushed about 6 miles up the river. We could not get an accurate count in the dense underbrush. Elk tracks were, however, numerous all the way. The bulls are reported to winter higher in the mts. We saw only a few bull tracks.

A few deer tracks were seen, but on the whole, not abundantly.

One & possibly two cougar's tracks were seen at intervals along the trail.

Aplodontia holes are common.

Mink picked up 3 bobcats droppings and one bobcats tracks were seen on the trail.

A flock of crossbills was heard.

On the whole, the forest ~~had~~ has

HOLMES 1934

Bogachiel Guard Station to Hyack & Return

April 26, 1934

meager bird life at this time of year.

Enroute back to camp we met a young fellow with 2 cougar hounds & gun who is hunting for cougar & bobcats. He reports having killed two cougars this month along the Bogachiel. The Forks Isaacs/Walton League pays a $15. bounty on cougar. They report enough money left in the treasury for 2 more bounties.

April 27, 1934

Returned to Forks.

April 28, 1934

Today we drove to Clearwater and a few miles up the new CCC-built road. Vegetation is the same as before. We interviewed a Mr. Crippin & his wife who have lived at Clearwater [redacted] since 1901. They reported that elk inhabit the forest all around Clearwater, particularly during fall & rutting season. They hear the bulls bugle. Mrs. Crippin said she saw a large band of mixed elk a few miles above town about 5 years ago (some 200 she estimated). They both say that several miles (perhaps 15) up the

Thompson

Clearwater

April 28, 1934.

river there are large grassy bottoms with little underbrush, and that elk inhabit these considerably. They didn't think there was any great/ seasonal movement of elk/ except that elk leave the vicinity of the town in winter and are found/ further out from the river on ridges. Their explanation of the elk drift is to be doubted, I think.

They say, as do all early inhabitants whom were interviewed, that elk were not as numerous when this country was first settled as they are now. They attribute the increase to predatory animal control.

From Clearwater we drove to Quinault and down to an old logging road in the burn south of Olympus Nat'l Forest to Burnt Peak on West Fork of Humptulips.

At Quinault, we interviewed Fulton, District ranger for Quinault District.

Fulton reports elk numerous all along Humptulips River in fall & winter and says that 44 bulls were slaughtered at Burnt Peak during the open season last November. He says that there are still plenty of bulls left. These elk were accustomed to people & were easily shot. When we got to Burnt Peak a

Thompson Quinault April 28, 1934.

fisherman, who said he had worked there for several years, told me that from 150-180 bulls were shot there last fall. Whether he was referring to unofficial or unstabulated killing or whether his figures were wrong I do not know. He also said that herds totaling several hundred were always to be found in the burnt over area along the Humptulips in fall & winter, and that the bulks were higher in the timber.

Fulton said elk were common on all the main drainages of his district, that they wintered down in the river bottoms and summered up even to timberline in the monument.

Trappers, he indicated, had in past years taken fisher, mink, marten all around the higher country around the edges of the monument and in it. One trapper's cabin he indicated was just within the monument up on the North Fork Quinault. It is evident that fur bearers have been taken from the monument for many years to the same extent as outside it. He seemed to have no definite plans or notions of game or wild life management, and I feel that the monument has been used

Dendragapus f. fuliginosus

Thompson Quinault April 28, 1934.

just as the Forest except for hunting legally, which is of course forbidden within the monument.

— At Burnt Peak we saw 4 Sooty Grouse and one rabbit (dark reddish in color) which we thought was the Washington Varying Hare.

The burnt area is reported to be a favored haunt of bear, deer, grouse, elk, and birds generally. It is covered with a greater variety of underbrush and appears to present more animal habitats than the mature forest.

In the evening we drove to Agnar Olson's. He is one of a large family which has lived here over 40 years. He lives approximately 3½ miles above Quinault. He is reputedly reliable, and best informed on game in the area. He owns the chalet in Enchanted Valley within the monument, East Fork Quinault, and Graves Inn, also on East Fork. He takes hunting & camping parties through the mountains. Points of the interview were as follows:

Olympic black bear. Only certain bears get the lawn killing habit. They may go all around lawns & domestic sheep without touching them. Olson said he had seen a band of elk

Thompson

Quinault April 28, 1934

leave a certain watershed during the course of a day and wander over to the next stream. Toward evening a bear would come out of its day's sleep at the original elk site, pick up the elk trail by scent and follow the trail as a dog would do until it comes up to the band again — this, the antics of the fawn eating bear.

Martin, mink, fisher have been trapped for years in the Olympics. Fisher and martin are now rare in the monument. Most of them were trapped out of the monument 15 years ago! Cougars are the worst enemy of martin. When the snow is deep martens in crossing open areas are easily caught and killed by cougar.

Otters are common along streams of the region. A few years ago on the Dungeness, otters were not trapped for several years. Trout below the dam were practically cleaned out by the otters.

Coyote. Coyotes have never been on the west side of the mountains to Olson's knowledge. A few years ago a forest fire on the east side somewhere in the Dosewallips region,

Thompson Quinault April 25, 1934.

sent the coyotes higher up on the ridges, I judged, into the monument. Olson said he heard them howling all around where they had never been before. He did not know whether they later went back down.

Timber wolf. Wolves may or may not now be on the peninsula. They were poisoned everywhere, even 40 years ago, by settlers who shot elk and strychnined the carcasses. By 25 years ago, they were practically gone. Olson commented that the areas where this poisoning was done were worthless for fur trapping for many years afterward.

Foxes, he said, were never known in the area.

Cougar. Olson, himself, has killed about 50 cougars in the peninsula. A beautiful 8½ ft. cougar skin was mounted on the wall of the Olson living room. He said that even larger ones had been killed. This one he said weighed weighed 180 pounds when killed 2 years ago, a few miles up the river. Cougars are found sporadically. He said he had killed 5 within 2

Thompson Quinault April 28, 1934.

days in a limited area and that his brother had returned the next day and gotten a 6 th. They may move 30 miles in a day. Sometimes they are gone for a week or so from an area where their tracks have been previously seen, then they are again seen, indicating a definite "beat".

He also reported that during the severe winter of 1932-33, when elk were practically "yarded", that he found where a cougar had killed 11 elk calves, eating only a portion of a few and apparently killing the rest "for fun". Evidence: those uneaten were badly scratched all over the body but not severely bitten anywhere, indicating that the cougar had played with them in the killing process.

Bobcats were discussed but Olson had nothing specific to offer except that they are common.

Aplodontia he mentioned as often clearing vegetation out of an area around their burrows.

Deer he said were not numerous and never had been since he could remember. However, he added that they have always been hunted. He commented that many deer

Thompson Quinault April 28, 1934.

were able to remain up in the Olympics during winter because they ate the moss which, brown in summer, turns white in winter & hangs from the trees. Snow even though 20-30 ft. deep, blows off the windward side of the peaks leaving exposed rock & soil and where it does lie it is often hard-crusted enough to bear the weight of a deer.

Elk. Olson says that elk do not ordinarily starve in winter. That a hard winter came in 1915-16 and again in 1932-33 at which time snow came so suddenly and so deep that elk could not get out. They yarded up and trampled lanes through the snow so deep that only their heads & sometimes backs were visible above the snow. At these times they ate hemlock & fir boughs as high as they could reach until stubs as big as his index finger were left dangling from the trees. He estimates that 1,000 elk starved to death in the Quinault watershed in the winter of 1932-33. I think this figure too high. Many died over near Reflection Lake also.

He reports the seasonal drift from timber line in the mountains to river bottoms in winter. He says that

Sol Duc Hot Springs April 29, 1934

At the Sol Duc bridge a Western Harlequin Duck (Histrionicus h. pacificus) and its mate were feeding in the river. They dived and swam under water, when foraging, apparently collecting food from the stream bed.

Two dippers (Cinclus mexicanus unicolor) were also seen at the bridge.

Thompson Quinault April 28, 1934.

the Duckabush, Dosewallips and Skokomish elk drift over into Quinault watershed in winter. The main wintering ground of the Quinault lies between Graves Creek & Enchanted Valley on the East Fork. Elk also winter all along the Humptulips and Wynoochee rivers. But Olson says that the Quinault is the largest wintering grounds outside of the Hoh.

Everyone agrees that few elk live any length of time once they wander into the Quinault Indian Reservation.

The bulls at this time of year are higher up in the mts.

April 29, 1934

Lu Forks and to Sol Duc Hot Springs.

April 30, 1934.

From Sol Duc Hot Springs to Olympus Guard Station, on upper Hoh.

This trip lay over the High Divide. A trail leads up to the top of the Divide but none down the other side.

Ranger Bill Dana reports that about 50-60 elk live in the Soleduck watershed and that they usually winter a few miles below Sol Duc Hot Springs. We saw a few elk tracks as we went up the

Thompson

Sol Duc Hot Springs to Olympus G.S.

April 30, 1934.

trail. Huckleberry is the most prevalent browse plant, with some Salmonberry. There was no indication of anything but light browsing.

Snow lay in drifts & later in solid mass perhaps many feet deep from Sol Duc Park, up through the 4 lake basin to the divide. On the Hoh River side of the divide there was no snow.

Aploodontia burrows were numerous as soon as we started down and continued almost to the Hoh River. There was marked aploodontia utilization of of huckleberry over the upper half of the slope. In many places it amounted to most of the herdure of the plants. Their cuttings were high, indicating that most of it was done in snow of several feet depth. Twigs cut by aploodontia are sliced off diagonally, clean, as when a beaver cuts them.

All through the aploodontia sector was an abundance of elk and deer sign, much of it this winter's. It seemed to us that over-browsing was in its early stages. The aploodontia utilization was to such an extent as to take

Thompson Sol Duc Hot Springs to Olympus G.S.
April 30, 1934.

perhaps even a critical portion of the forage during a severe winter. The questions which occurred to me were these: 1. What preys upon aplodontia?
2. If it is bobcats, weasels, martens, fishers or cougars, all of which have been trapped and hunted for many years, are the aplodontia more numerous now than formerly?
3. In other words, has trapping of fur-bearers resulted in over-browsing of elk & deer range?
This needs investigation, but the thesis seems probable.

Whether elk would winter as high on the slope in ordinary winters is doubtful, but this one of mild snow fall has allowed a probable higher range. The same may be true of deer. But this much is certain, a heavy utilization of range by both elk & deer has occurred this past winter almost to the top of the High Divide, on the Hoh River slope.

Elk were also flushed down along Hoh River bottom in the vine maple regions.

[redacted] bobcat droppings were collected in Hoh River bottom along 2 miles of trail.

Thompson

Sol Duc Hot Springs to Olympus Guard Station
April 30, 1934.

These have occurred since Marine cleared the trail April 19. One was collected up near High Divide in the Aplodontia area.

Five Sooty grouse were heard booming throughout the day.

Winter wrens were less common on the Soleduck than on the lower Hoh and Bogachiel.

Varied Thrushes (Ixoreus naevius naevius) were constant singers throughout the forest.

Olympus Guard Station to Sol Duc Hot Springs via Deer Lake Trail
May 1, 1934

This morning we walked down the Hoh River about 1 mile from the cabin and back. Altogether this gives us a cross section of about 4 miles along the upper Hoh Elk winter range.

This area is densely grown with vine maple, and with some huckleberry and salmonberry. Browsing appears to have almost extirpated the salmonberry. We found only little shoots of it, with some canes growing out of browsed stubs. The underb-

Thompson

Olympus Guard Station to Sol Duc Hot Springs

May 6, 1934

growth has been considerably cleared out. All of this area is within the monument. It is possible that this extensive browsing has added to the recreational value of the area in making it more picturesque and habitable than the more densely brushy areas. It is difficult to say whether the area is overbrowsed because we could not determine whether the forage is still diminishing or whether it has reached a new balance.

Mpine collected in this mile, two & cougar scat and three bobcat scat. The cougar scat contained elk hair. Five more bobcat scat were collected between the station and Deer Lake. One of these (presumably bobcat) up near Hoh Lake, contained fawn hair and feet (deer), suggesting to us that if it were bobcat it was carrion.)

Summer elk sign was numerous on the top of the ridge above Hoh Lake. It appeared that the bulls stay high on these ridges leading to Bogachiel Peak.

At several places during the

Olympus Guard Station to Sol Duc Hot Springs
May 1, 1934.

Last few days we have seen ~~2~~ old decomposing logs eaten by elk. At the Hoh, near the cabin, a 4 ft. diameter log, long decaying, has been extensively dug into and eaten along the under side. Tracks indicate that elk get down on their knees to reach as far in under as possible. Muir is having some of this rotten wood chemically analyzed to ascertain what ingredients it contains.

A spotted skunk's (Spilogale phenax olympica) den was located under a log near-by.

Fresh lizzy sign was found on top the ridge above Holy Lake.

Five different Sooty grouse were heard booming during the day.

One California Creeper (Certhia familiaris occidentalis) was seen in Hoh valley.

It is reported to us that elk and deer summer in Bogachiel Basin at the foot of (and on the slopes) Bogachiel Peak. A hunter in Forks told me that he had gotten his deer there every fall for many years. Bill Dow the Sol Duc ranger reported that two years ago a band of elk

Olympus Guard Station to Sol Duc Hot Springs
May 1, 1934.

came into the basin with approx. 25 calves; that two bears followed the herd and killed every calf during the season.

One Golden Eagle (Aquila chrysaetos canadensis)? was seen at Bogachiel Peak.

Snow lay from just below Hoh Lake to Deer Lake. Large side-slope drifts covered the trail more than half the time. One bobcat's tracks crossed the snow above Hoh Lake.

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Elk kills during hunting season Oct. 19-22, 1933.

| | |
|---|---|
| Humptulips | 30 |
| Quinault | 3 |
| Queets & Clearwater | 28 |
| Hoh | 30 |
| Bogachiel | 3 |
| Calawah | 1 |
| Soleduck | 1 |
| Dosewallips | 3 |
| Skokomish | 5 |
| Wynoochee & adjacent | 26 |
| Scattered areas | 27 |
| Total | 157 |

ompson

## Elwha River

May 3, 1934

This morning we interviewed Ranger Wm H. Vallad of the Elwha. Results: Elk estimate, 500 for Elwha drainage. Normally their winter range is outside of the monument. About 16 hunters went up last fall but got no elk because late winter flood not driven them out of the monument. No overgraging so far as Vallad knows. Large part of old winter range is now under reservoir, Lake Mills.

18 sections in the monument have never been in the game preserve. This section is bounded by Boffman Creek on north, thence south to county line & east to monument corner on county line. Cougars have been hunted in here this winter. Michaels, CWA predatory animal hunter under Couch has taken 6 or 7 cougars this winter in the region.

Deer more abundant on Elwha than elsewhere in forest. In recent years (2 or 3) a band of 52 has been seen at one time in Humpe's field. Deer are hunted extensively here, particularly in the 18 sections inside the monument.

In hard winters the elk have gone on over through the farms within few miles of Ocean & Port Angeles.

Browse is same here on west side.

Thompson Doxewallipas River

May 3, 1934

Road goes approx. 14 miles up the canyon. Vegetation is similar to west side except for practically no huckleberry and with a preponderance of Adoxa moschatellina, Cornus (Flowering Dogwood), Rhododendron, madrone, salal and thimbleberry.

At the end of the road, elk & deer sign are common. Plants showing most browsing are: salal, Adoxa moschatellina, vine maple and Cornus. Over-grazing is not apparent.

# Upper Redrock Lake

Aug. 17, 1934

Today, went out around East end of Upper Redrock Lake, over to Swan Lake, which was practically dry in company with Mr. Clarence C. Hunt and Mr. Archie Hayden.

Mallard. 3 mallards were found dead and 3 sick. Mr. Hunt dissected one dead mallard recently & found considerable shot in the digestive. He feels that the mallards, Pintails & other ducks too, are dying of lead poisoning. B. D. Sugar also says mallards are dying, but he does not know why.

Swans (trumpeter) Sugar says there are 3 pairs of swans with cygnets on lower Redrock Lake; one pair with 7, and 2 pairs each with 5. Mr. Hunt says he knows of 2 pairs of swans with cygnets on upper Redrock Lake; one pair with 5 and one with 2.

All people interviewed say that Lew Wedderer, custodian Lakeview Gun Club, shot 9 swans last Fall & was not prosecuted because he swore they were Chinese Geese. Sugar knows of 17 swans having been killed last fall.

# B. H. Thompson
## 1929-1957

## Journal

1949 Wyoming: Yellowstone N. P.

Nevada: Lake Mead National Recreation Area

# Death Gulch

Data from E. T. Peters's "Lives of Game Animals. Vol. II. Part I.

p. 75.

"Death Gulch is a well-known, small and gloomy ravine in the northeast corner of Yellowstone Park. Into this the wild things are tempted by promise of food, water, and shelter. But they are led into a bath of invisible poisonous vapor in which each, in turn, sinks down to sleep his last sleep."

"Twice it has been investigated by members of the US Geological Survey. In 1888 Walter H. Weed visited the place and wrote an account of it for Science, Feb. 15, 1889. After commenting on the volcanic origin of the gulch formation, he says: 'Although hot water no longer flows from these vents, gaseous emanations are now given off in considerable volume.'"

Arnold Hague, his chief, was successful in obtaining evidence of the presence of carbon-dioxide gas in these emanations.

Weed says: 'The gulch ends, or rather begins, in a scoop or basin about 250 feet above Cache Creek—'" p. 76 "The bottoms were tested for carbonic acid gas with lighted tapers, without proving its presence, but the strong smell of sulphur and a choking sensation of the lungs, indicated the presence of

now squashes, while a strong wind prevailing at the time, together with the open nature of the ground, must have caused a rapid diffusion of the vapours."

"Flora of Utah & Nevada"
National Herbarium Vol-25
Smithsonian Institution
Gov. Printing Office

Lake Mead Recreational Area

Aug 7-8, 1949, up Lake with Baggley, Bellerdop, Com. Straus, McPhail (in charge of power for BR) Nielson & Vanson of Project Planning, Power & Jordan. Spent night at Sandy Point, where, incidentally, most of northeast beaches are ~~over~~ covered by high water, a dirty wood & trash float in alcoves. South side of Sandy Point exposed to wind still wonderful beach at high water.

Aug 8 up Canyon to rapids above Bridge Canyon Dam site, perhaps 44 miles above Pearce Ferry. Tremendously impressive canyon walls topped by thick strata resembling Redwall limestone, about the same all the way as near mouth of Canyon. About Quarter-master, inner gorge of granite & gneiss begins to form & finally slopes into gorge about 600 ft. deep at BCD site.

At this muddy stage of upper end of Lake, with 12 to 15 ~~thousand~~ second feet of water about el. 1197, it is impossible to differentiate between end of ~~Lake~~ reservoir & beginning of river. Silt apparently very close to surface all way to lower end of Canyon. No hint

sandbars several times & were badly stuck below Quaus operations for about 45 minutes. Trip might not have been possible a week or 10 days later. Larson believes that construction of Bridge Canyon Dam will undoubtedly result in some channel flushing which should make possible float trips again. Had lunch at Separation Canyon & were photographed by Glacier commemorating 3 who left Powell's party.

Larson to send 4 prints of mouth of Havasu Canyon. He & I discussed our joint studies & urged that so-called multiple purpose projects include recreation as one of purposes actually planned & provided for, instead of merely tacking it on as reimbursable a large part of project cost because of surrounding scenery, as at BCD. He agreed. He urged, and I agreed, that we in NPS needed to refine recreational evaluations further.

Straus was non-committal on suggestions that BC bills should be amended to limit dam height to 1877. But both he & Larson know higher dams infeasible. I do not

believe this, however, & feel that NPS should again press for limitation on height of dam.

Likewise he was noncommittal on suggestion that Jackson Lake dam be converted to dyke & spillway to hold level of lake constant. Only reasons he advanced were great cost of providing additional storage and fact that 1 reservoir storage should not be lost. Believe we should now request Departmental consideration of this problem, in writing.

Larson says planned to construct Coconino Reservoir at same time as Bridge. Senate has eliminated Bluff Reservoir. Says Coconino will hold back about 1/4 silt of lower Colo. R.

Aug. 9.

To Davis Dam + Eldorado Canyon with Tillotson + Art Brown.

Davis Dam master plan looks fine. But believe Eldorado Canyon plan should be revised to get lodge & residences up out of trash & on bluff overlooking lake.

Aug. 10. To BCD village site on south rim of Canyon, with Bill Balknap & his nephew, in Dodge Power Wagon. Last several miles of road recently bull-dozed out by Indian Service for Reclamation. One of suggested village sites is on mesa above dam site, with spectacular canyon views in both directions. Believe that a town here might grow indefinitely because of mild summer, winter climate. Tourist resort attractions: accessibility to highway & railroad, & goat activities.

From rim, the difference between the river above Lake Mead and the upper end of the Lake is apparent, although not great. The lake looks still, muddy, somewhat wider than river and somewhat lacking in interest. The river has visible rapids which we could plainly hear, and visible current. It widens & narrows and seems "alive."

At Quartermaster Canyon, which we reached about sunset (perhaps 20 miles below Bridge Canyon) the reservoir is quite disappointing as seen from the rim. It is like "dead water"; muddy, wider, no

visible current, sand bars common. It was at its best at high water and must be even less attractive as the lake level falls. Possibly it will become more attractive after Bridge Canyon Dam is built and only clear water enters upper end of Lake Mead. The attractive end of Lake Mead will then be shifted to the upper end of Bridge Canyon reservoir, for a few years unless Glen Canyon Dam is built, the reservoir as seen from Toroweap Point may resemble that now seen at Quartermaster Canyon. If Glen Canyon Dam is built, perhaps the muddy & undesirable features will be transferred to it, with resulting improvement in Grand Canyon park and monument.

The Canyon scenery at Quartermaster exclusive of Lake Mead, is impressive. Burnt Springs Canyon opens to the north, opposite mouth of Quartermaster and runs back to base of Tuna Point on Shivwits Plateau. Grand spot for campgrounds.

We drove down past Duncan Ranch

# B. H. Thompson
## 1929-1957

## Journal

1957 Kansas: Flint Hills

Aug. 17, 1957

Dr. E. R. Hall, Charles Brown and myself visited the proposed Flint Hills bluestem grass area on the west side of the new Kansas Turnpike southwest of Emporia, as described in Hall's letter and included in the Collection Report. About midway of the area there is an overhead foot and cattle pass on the east side. The overpass provides access from the Turnpike to the Flint Hills area, but passage is locked. Hall points out that here is a point where entrance, already provided, so that people traveling the Turnpike could readily get into the area.

We drove south to the first exit, then north past Matfield Green to Bazaar; there south some 4 or 5 miles, into the area and diagonally northeastward across it, following part of the trail a stage noted for its gay flavor. We crossed several small streams, generally with pools of water but no flowing. Cattle in many fields. The area is

rolling hilly land with a mix of deciduous
topography. Trees and fallen ones
abound but most years by drought
have killed some trees and many
branches in living trees. Erosion
is fairly common in stream head-
waters, particularly near northeast
corner. Trees include walnut, elm,
hackberry, sycamore, willow and
cottonwood
others; ash found only in stream
bottoms and are scarce in pasture.
Cattle are in small herds, usually fat. 520,
in natural annual pasture. Cattle fed,
Land recently sold for $70. per acre.
This was believed to be about average
price.
Hall says deer has grain chicken,
upland plover, coyote, fox, raccoon
rabbits. He would like to see deer,
elk, deer, antelope brought back.
Estimate that the field would cost
from $1 1/4 to 1 1/2 million. It would probably
have heavy visitation because of location.
We also want to visit small quarter on
Bloody Creek, a tributary of Cottonwood Creek.

Aug. 14, 1957

Chester Brown and I saw Prof. Jomaas at N. Hays State College and discussed the Paonia Bills area. He said — potentially that, although it is somewhat depleted it could recover, under certain conditions, if protected. He would picture individuals slowly, beginning on lines last if the area under protection and that appeared to me that it. He used term bio-balance, referring to the interdependence of plants + animals increasing and holding natural conditions. He suggested, he said, that there might be some practical chance of acquiring some Bills area like the plots of better grassland areas described in the Reclamation report, which are near the base of Mining Bills ranches.

Jomaas suggested desirability of preserving perhaps 10 grounds of samples of say 6/4 acres each at widely separated places to supplement one central area. These to be widely fenced + protected with roadside exhibits to explain. Stress. He cautioned against letting them also surrounding cattle would be putting stuff would blow over into them & turn them to weed patches.

Aug 15, 1957

Charles Brown & I inspected the Pawnee Buttes area (Weld County, Colo. — #3 of Allotments) via New Raymer, along south & east sides to last good road in northeast corner below escarpment, thence west & with them [illegible] generally, thence with between Pawnee Buttes and out northwest corner; thence back into western middle and out southwestern part in below escarpment.

The area is [illegible] scenic, with the escarpment and Buttes always standing out as the dominant landmarks. Grass is generally fair to good, with pale [illegible] small, [illegible] scattered bunches of cattle and relatively little cultivation except up on top of northwestern portion of escarpment. Here one gets the impression of more range and grass crops, probably as result of [illegible] and spring. The Great Plains are green this year, after several years of drought.

We saw 1 golden eagle, thousands of Lark Buntings, numerous doves, [illegible] antelope, ground squirrels or prairie dogs — all of which were reported in the area in 1954.

This area looks very good to me as potential G.P. area, but just what control it probably will get beyond present [illegible]

Aug 16, 1957 Creek, no of Clay

The western portion of this area, largely or entirely west of highway 87 is much the best — magnificent vistas, interesting topography, varied cover of grass, cut, sagebrush, juniper & pinyon on higher ridges, and (at least) small grove of ponderosa pine northwest of Chugwater Creek, cottonwood & willows in stream bottoms and several running clear streams. The Chugwater Creek is murky, — there is a railroad along it and numerous ranches, some prospects opening, most, however, mediocre.

The Horse Creek Oil Field contains perhaps 25-30 derricks, some pumps working, but all we saw remarkably clean and actually affecting the surface very little. Perhaps 400 sq. miles south of the Oil Field — east of highway 87 in the west. We did not get into the southwest corner, but it appeared very similar to the northwest portion west of highway 87. Ownerships appear to be very large cattle ranches. Cattle in good condition, but not as fat as they are Flint Hills. We saw 2 small groups (6-10 ea) of antelope in northwest corner. Also 1 golden eagle & four jackrabbits (one P.B.

The eastern 1/3 of the area is more heavily grazed, less rolling, generally flat to rolling; cut up into numerous small ravines. We were disappointed in it, except for scenic viewpoints, which are composed of Bear Creek Mile or two in Canyon. These, however, are less spectacular as landmarks than Palomas Mts. We felt that area east of Highway 87 should not be further considered, unless a portion of it (four square miles) south of Cedar & east of Highway 87 were found to be needed as an addition to Eastern area.

We saw 1 Red Rattlesnake on road from 20 miles up Pinto Creek & about town of Cloverdale, and 1 dead rattlesnake in eastern portion. It is probable that all these grassland areas are well inhabited by rattlesnakes.

Guernsey Reservoir Recreation Area is now being managed by Wyo. Game & Fish Comm. It is full of silt, would last another 25-30 years if Glendo Reservoir not being constructed above it. Guernsey is used for waterfowl hunting and recreational fishing. B.R. also permitted several private cabins to be constructed on good public use areas. Water murky, but fishing unusually good.

Aug 17, 1957

Ft. Laramie proposed extension to include tract north of Laramie River and including historic route to Fort approx described. Former Gov. Miller has looked at it, says N.M. should have it and has authorized local real estate dealer to take options on proposed addition north of tract holding out for $50,000.

Scotts Bluff boundaries approved by MGB Cent. Com. appear cleared except that irrigation ditch in southeast corner should be included

Draft #1
Aug 12, 1957

Area #1 largely in cattle ranches. Some along Niobrara River, which is small (abt 15' across) clear stream generally north of Sandhills. Flat could acquire initially segment of Niobrara River, possibly ~~entirety of Unit~~ ~~two miles east of Valentine, including falls~~ (~~that Valentine~~) ~~to~~ Valentine generally project.

Flat Basin ~~—~~ Sel. flat state should acquire entire area in Sandhills region, also, ~~—~~ Unit, the Valentine Nat. Wildlife Refuge, in ~~separated segments, including many~~ of the lakes & marshes. Nat. in the Refuge, however, cattle ranching ~~operations~~ go on the same as outside.

Nat.
Fort Niobrara Wildlife Refuge appears to include the principal falls on the River.

Areas #1E, 1W, of the Caladonia Co.

1E is the finest Gt. Plains Segment with magnificent rolling grassland Rds, with pine, juniper, sagebrush, and withey, spectacular headlands along the south side of the White River. Much of it is in the Pine Ridge Indian Reservation, but Rutter Inc. owns it. It is studded with ~~shrubs~~ holdings (white ranches) with a few scattered large ones for cattle and sheep. For all practical purposes it is unavailable, in my opinion.

1W is not quite as spectacular but very fine. However it is studded with lakes also, and, in my opinion, unavailable.

The Caladonia area is desolate and not the kind of Great Plains area that could afford to support.

Summary, it is my impression that the Pine Ridge area holds an excellent potential for sage grouse, but much of it is probably unavailable during the period of high cattle prices and wet years.

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